

# **APPENDIX C**

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## *SUNSET-ATHENS TRAFFIC STUDY*

September 28, 2004

Ms. Lisa Worrall  
**Analytical Environmental Services**  
2021 N Street; Suite 200  
Sacramento, CA 95814

**RE: ATHENS CONNECTOR TRAFFIC STUDY**

Dear Ms. Worrall:

This letter summarizes our review of the potential traffic impacts related to the proposed Athens Road connector. The report contained herein is based upon work prepared as part of the *Auburn Rancheria Gaming and Entertainment Facility Project Draft Environmental Impact Report*, an analysis performed by Larry Wymer of your staff dated February 26, 2004, and supplemental analysis performed by our firm. A main component of this update was to confirm the traffic impacts assumed the inclusion of the Foothills Boulevard extension in the cumulative transportation network, and respond to a number of technical issues raised by Placer County Department of Public Works.

**INTRODUCTION/PROJECT DESCRIPTION**

This analysis was performed to assess the potential traffic impacts resulting from construction of the proposed "Athens Connector." As proposed, this arterial roadway would begin at the existing western terminus of Sunset Boulevard at Cincinnati Avenue and continue westward for about one half mile, to a new intersection of this Sunset Boulevard extension and the new connector road. From this intersection, the new connector road would continue northward about one and a half miles to Athens Avenue. At this new intersection, Athens Avenue would be widened and dedicated turn lanes added. The road would have two 16-foot wide lanes, a 14-foot raised median with emergency median crossings at intervals of approximately 800 feet between Sunset Boulevard and Athens Avenue, and an overall right-of-way width of 88 feet. The road would also pass through eight additional parcels that contain existing road easements. UAIC, the applicant, would build the road to Placer County standards and then relinquish the entire road right-of-way and improvements to the County.

**STUDY INTERSECTIONS**

The following existing intersections were identified for this analysis with the assistance of Placer County traffic engineering personnel:

1. Industrial Avenue / Athens Avenue
2. Industrial Avenue / Placer Corporate Drive
3. Industrial Avenue / South Loop Road
4. Sunset Boulevard / Cincinnati Avenue
5. Sunset Boulevard / Placer Corporate Drive

6. Sunset Boulevard / South Loop Road
7. Sunset Boulevard / SR-65

Existing intersection geometrics and traffic control are depicted in **Figure 1**, along with AM and PM peak hour volumes.

## TRAFFIC OPERATIONS METHODOLOGY

Intersection operations were evaluated for AM and PM weekday peak hours at the study intersections using methodologies described below.

### Level of Service Concept

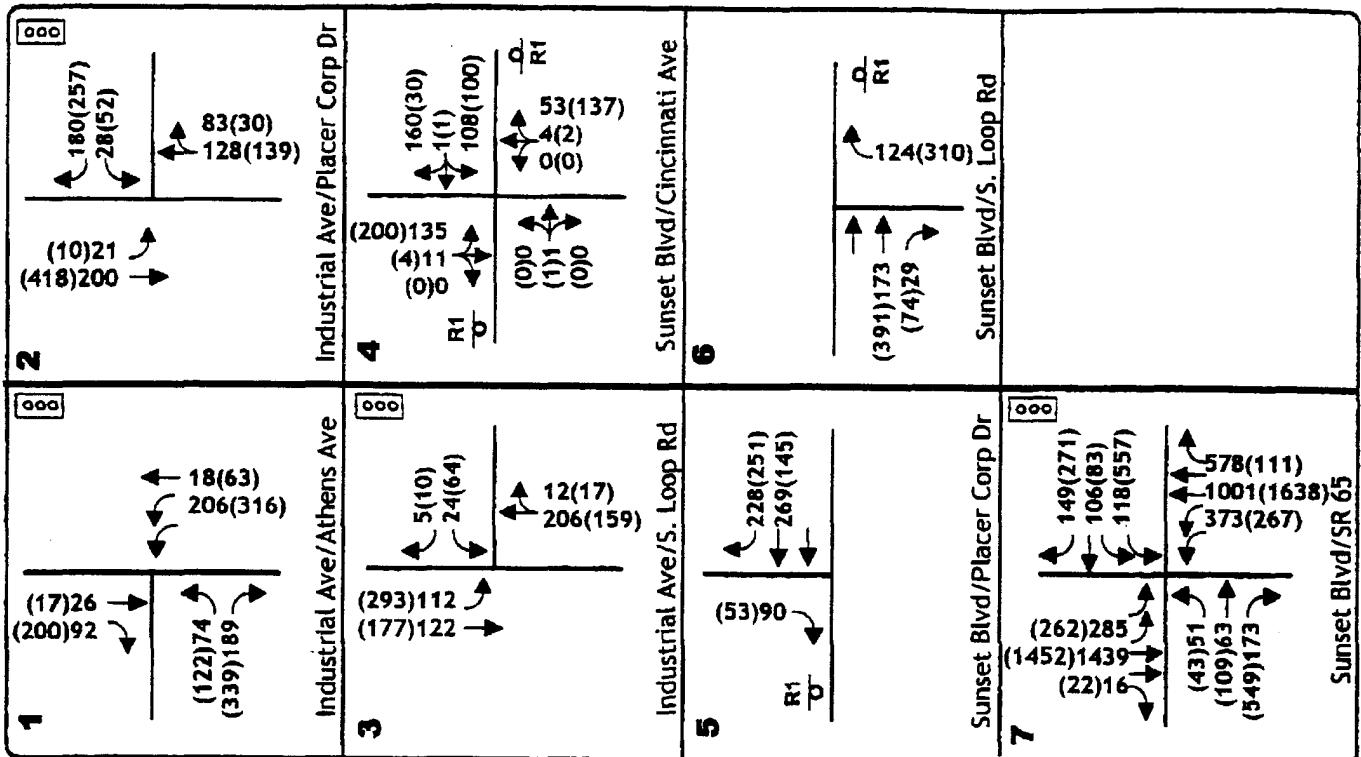
The operating conditions experienced by motorists are described as “levels of service” (LOS). Level of service is a qualitative measure of the effect of a number of factors, including speed and travel time, traffic interruptions, freedom to maneuver, driving comfort and convenience. Levels of service are designated “A” through “F” from best to worst, which cover the entire range of traffic operations that might occur.

### Standards of Significance

The significance criteria utilized for this analysis is based on Policy 2.B.1 of the *Sunset Industrial Area Plan* (1997) which established that LOS D, E or F is unacceptable. This policy also states an exception that level of service D is acceptable at intersections within one-half mile of State highways.

### Signalized Intersection Analysis Methodology

Signalized intersection analyses were conducted using methodologies outlined in the Transportation Research Board’s *Highway Capacity Manual, 2000*. This procedure calculates control delay per vehicle at a signalized intersection, and assigns a level of service designation based upon the delay. The average control delay per vehicle is estimated for each lane group for all approaches and for the intersection as a whole. The control delay is defined in the *Highway Capacity Manual* (HCM) as the portion of total delay attributed to the control facility, where the total delay is the difference between the travel time actually experienced and the reference travel time that would result during the ideal conditions. HCM 2000 signalized intersection analyses methodologies build upon methodologies as included within Transportation Research Board’s Special Report 209, *1997 Highway Capacity Manual*, but include additional methodologies for estimating queue lengths. Additionally, HCM 2000 methodologies calculate both delays and v/c ratios for all movements at a signalized intersection since all movements are stopped at some time during the signal cycle. Some movements, particularly side street approaches or left turns onto side streets, may experience longer delays because they receive only a small portion of the green time during a signal cycle, but their v/c ratio may be relatively low. It is important to examine both factors before drawing conclusions about the operations.

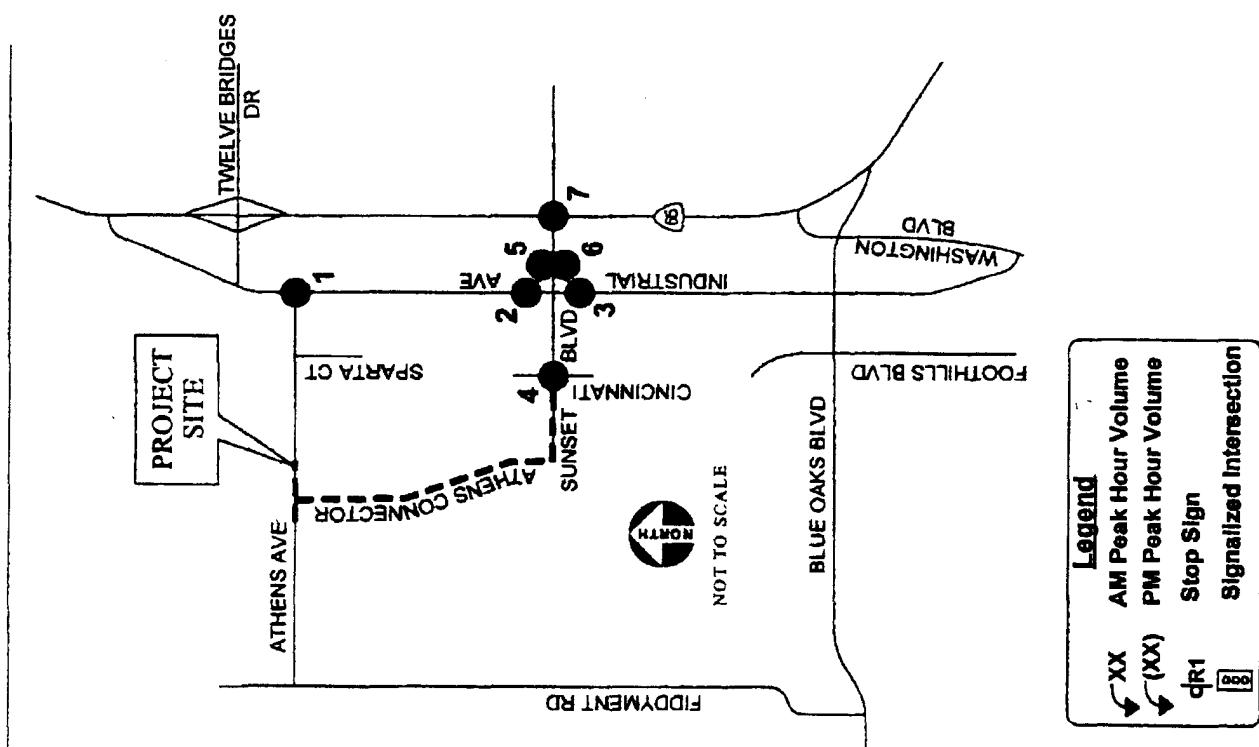


**EXISTING TRAFFIC VOLUMES  
AND LANE CONFIGURATIONS**

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figure 1



**Table 1** presents the level of service criteria for signalized intersections.

**TABLE 1**  
**LEVEL OF SERVICE CRITERIA**  
**SIGNALIZED INTERSECTIONS**

Level of Service	Control Delay per Vehicle (secs)	Description
A	0 – 10.0	Very low control delay. Occurs when progression is extremely favorable and most vehicles arrive during the green phase. Most vehicles do not stop at all. Short cycle lengths may also contribute to low delay.
B	10.1 - 20.0	Generally occurs with good progression, short cycle lengths, or both. More vehicles stop than with LOS "A," causing higher levels of average delay.
C	20.1 - 35.0	These higher delays may result from fair progression, longer cycle lengths, or both. Individual cycle failures may begin to appear at this level. The number of vehicles stopping is significant at this level, though many still pass through the intersection without stopping.
D	35.1 - 55.0	The influence of congestion becomes more noticeable. Longer delays may result from some combination of unfavorable progression, long cycle lengths, or high v/c ratios. Many vehicles stop, and the proportion of vehicles not stopping declines. Individual cycle failures are noticeable.
E	55.1 - 80.0	This level is considered by many agencies to be the limit of acceptable delay. These high delay values generally indicate poor progression, long cycle lengths, and high v/c ratios. Individual cycle failures are frequent occurrences.
F	> 80.0	This level, considered to be unacceptable to most drivers, often occurs with oversaturation, that is, when arrival flow rates exceed the capacity of the intersection. It may also occur at high v/c ratios below 1.0 with many individual cycle failures. Poor progression and long cycle lengths may also be major contributing causes to such delay levels.

Sources: *Highway Capacity Manual, 2000*, Transportation Research Board, Washington D.C., 2000.  
*1997 Highway Capacity Manual*, Transportation Research Board, Special Report No. 209, Washington, D.C., 1997.

### **Unsignalized Intersection Analysis Methodology**

Stop-controlled intersections are analyzed using the methodology outlined in the Transportation Research Board's Special Report 209, *Highway Capacity Manual, 2000*. This methodology establishes levels of service as a function of the "control delay" (in seconds) that an average driver will experience. "Control delay" includes initial deceleration delay, queue move-up time, stopped delay and final acceleration delay. HCM 2000 unsignalized intersection analyses methodologies build upon methodologies included within the Transportation Research Board's Special Report 209, *1997 Highway Capacity Manual*.

Although HCM 2000 analysis does not technically establish LOS for an intersection as a whole, a calculation of the average overall delay (and corresponding LOS) for the intersection is possible. It is common practice to use the overall intersection delay and LOS since the traffic volumes for the worst movement are usually minimal compared to the overall volume at the intersection. This analysis, therefore, provides both the overall and worst case LOS at each unsignalized intersection.

**Table 2** presents the relationship of average control delay to level of service for unsignalized intersections for two-way stop-controlled intersections.

**TABLE 2**  
**LEVEL OF SERVICE CRITERIA - UNSIGNALIZED INTERSECTIONS**

<b>Level of Service</b>	<b>Control Delay per Vehicle (Seconds)</b>	<b>Description</b>
A	0 - 10.0	Little or no delay
B	10.1 - 15.0	Short traffic delay
C	15.1 - 25.0	Average traffic delays
D	25.1 - 35.0	Long traffic delays
E	35.1 - 50.0	Very long traffic delays
F	> 50.0	Extreme delays potentially affecting other traffic movements in the intersection

Source: *Highway Capacity Manual, 2000*, Transportation Research Board, Washington, D.C., 2000.

## EXISTING CONDITIONS

To establish project impacts, traffic operations at the study intersections were analyzed during both the AM and PM peak hours.

### Existing Traffic Volumes

Existing (2003) peak hour turning movement volumes were collected at all of the existing study intersections during November 2003. Existing peak hour turning movement volumes are depicted in **Figure 1**.

### Existing Intersection Operations

Intersection operations were evaluated for existing weekday AM and PM peak hour conditions, and are summarized in **Table 3**.

**TABLE 3**  
**EXISTING INTERSECTION LEVEL OF SERVICE**

Intersection	Control	Movement	AM Peak Hour		PM Peak Hour	
			LOS	Delay (sec)*	LOS	Delay (sec)
1) Industrial Avenue / Athens Avenue	Signal	All	B	13.5	B	15.2
2) Industrial Avenue / Placer Corporate Drive	Signal	All	B	17.2	B	16.7
3) Industrial Avenue / South Loop Road	Signal	All	B	14.9	B	17.9
4) Sunset Boulevard / Cincinnati Avenue	Minor Stop	All	A	8.9	B	14.2
		<i>Worst</i>	C	19.9	C	23.3
5) Sunset Boulevard / Placer Corporate Drive	Minor Stop	All	A	1.5	A	1.1
		<i>Worst</i>	A	9.5	A	8.9
6) Sunset Boulevard / South Loop Road	Minor Stop	All	A	3.6	A	6.0
		<i>Worst</i>	A	9.4	B	15.0
7) Sunset Boulevard / SR-65	Signal	All	C	23.3	D	41.4

As the above table shows, all of the study intersections were found to operate acceptably for existing weekday AM and PM peak hour conditions. Detailed level of service analysis data is attached to this letter.

## **TRAFFIC IMPACTS – EXISTING PLUS PROJECT CONDITIONS**

Traffic impacts were evaluated in terms of impacts at study intersections for Existing Plus Project conditions, which is the condition that will exist following completion of the proposed Athens Connector.

### **Intersection Volumes**

Intersection volumes for Existing Plus Project conditions were established through use of the South Placer Traffic Model at the direction of Placer County Department of Transportation. Model generated outputs were supplemented and refined based on localized traffic distribution patterns, and information provided in recent area traffic studies (Sunset Ranchos DEIR, Auburn Rancheria Casino DEIR).

Raw PM peak hour traffic volumes from the model were adjusted based on existing PM peak hour counts, and detailed 24 hour/7 day traffic counts collected at Thunder Valley Casino driveways, and along Athens Avenue immediately east and west of the casino. AM peak hour volumes for Existing Plus Project conditions were established by establishing a factor derived by comparing AM peak hour No Project volumes to both PM peak hour No Project volumes and PM peak hour Plus Project volumes.

**Figure 2** provides a summary of the diversions that are projected to occur along the turning movements of all of the study intersections following completion of the Athens Connector. Diversions are shown as positive numbers, negative numbers, or zeros depending on whether a turning movement would lose volumes, gain volumes, or remain the same with the connector.

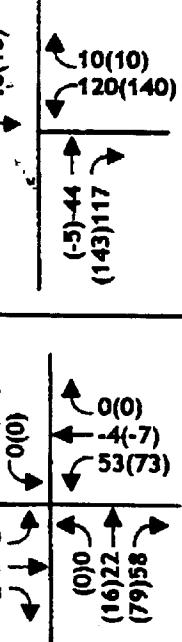
Application of these diversions to Existing No Project turning volumes results in Existing Plus Project turning volumes, which are depicted in **Figure 3**.

### **Intersection Operations**

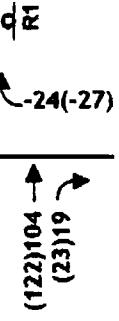
Intersection levels of service for Existing Plus Project conditions were calculated for each study intersection, and are summarized in **Table 4** along with a comparison to Existing No Project conditions.

**PROJECTED TRAFFIC DIVERSIONS  
EXISTING CONDITIONS**

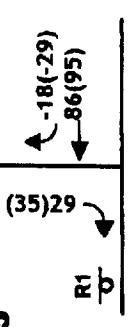
Sunset Blvd/SR 65 Athens Rd/Connector



Sunset Blvd/Cincinnati Ave



Industrial Ave/S. Loop Rd



Sunset Blvd/Placer Corp Dr



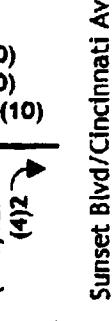
Sunset Blvd/S. Loop Rd



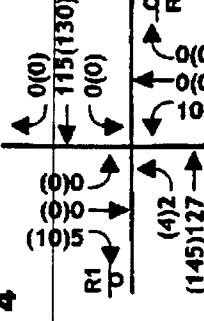
Sunset Blvd/Cincinnati Ave



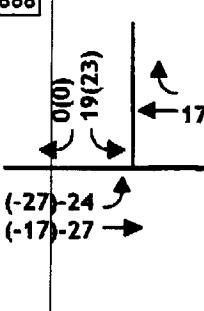
Industrial Ave/Athens Ave



Industrial Ave/Placer Corp Dr



Industrial Ave/Athens Ave



3

4

5

6

7

8

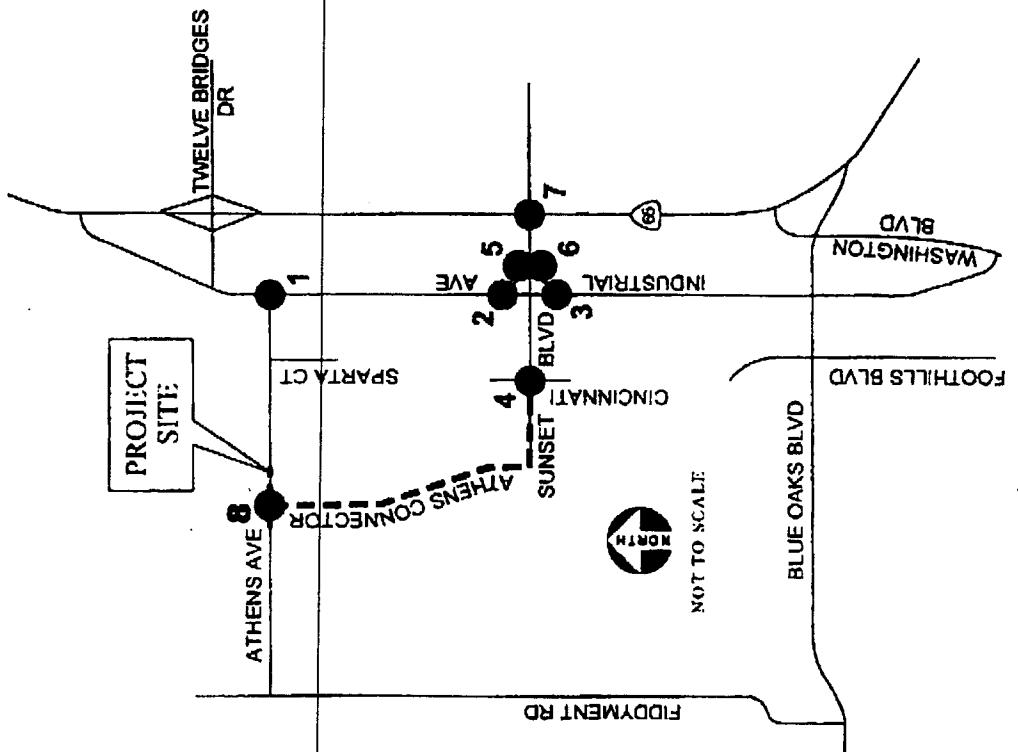
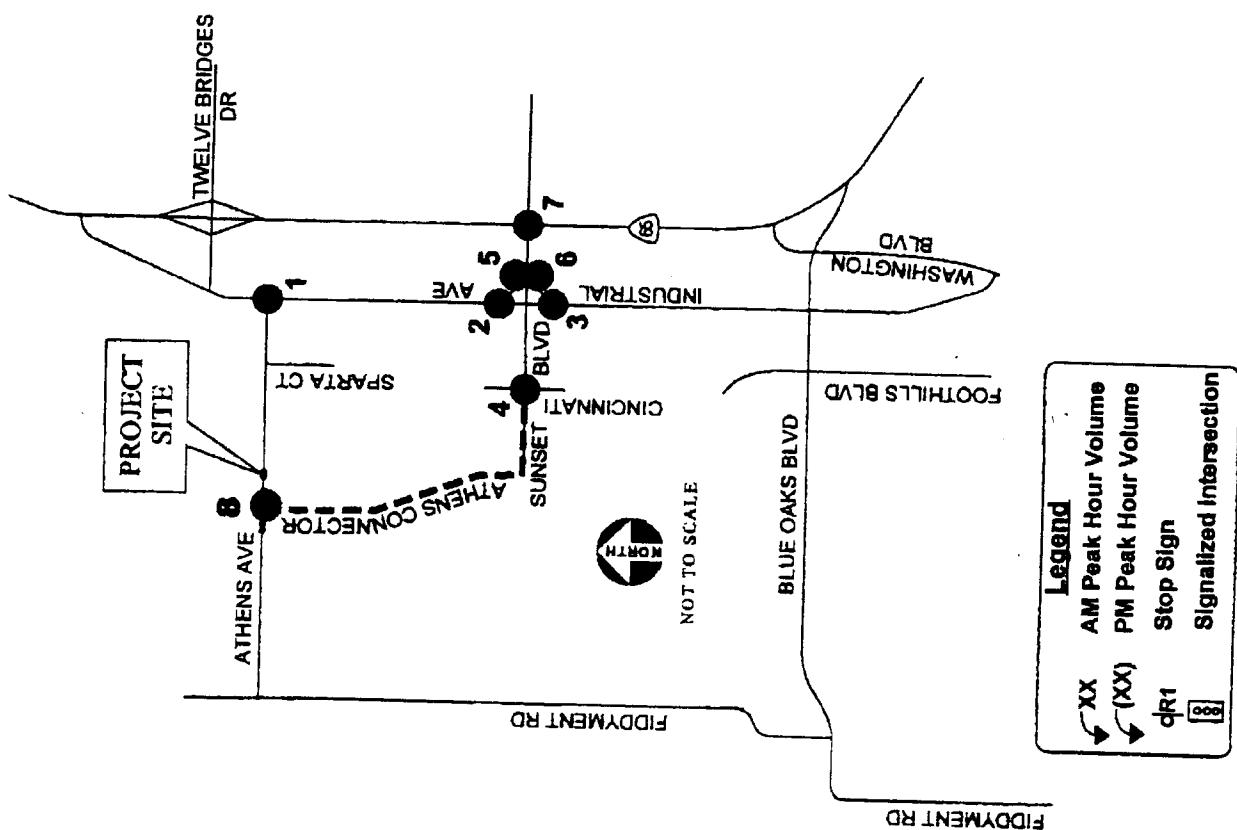
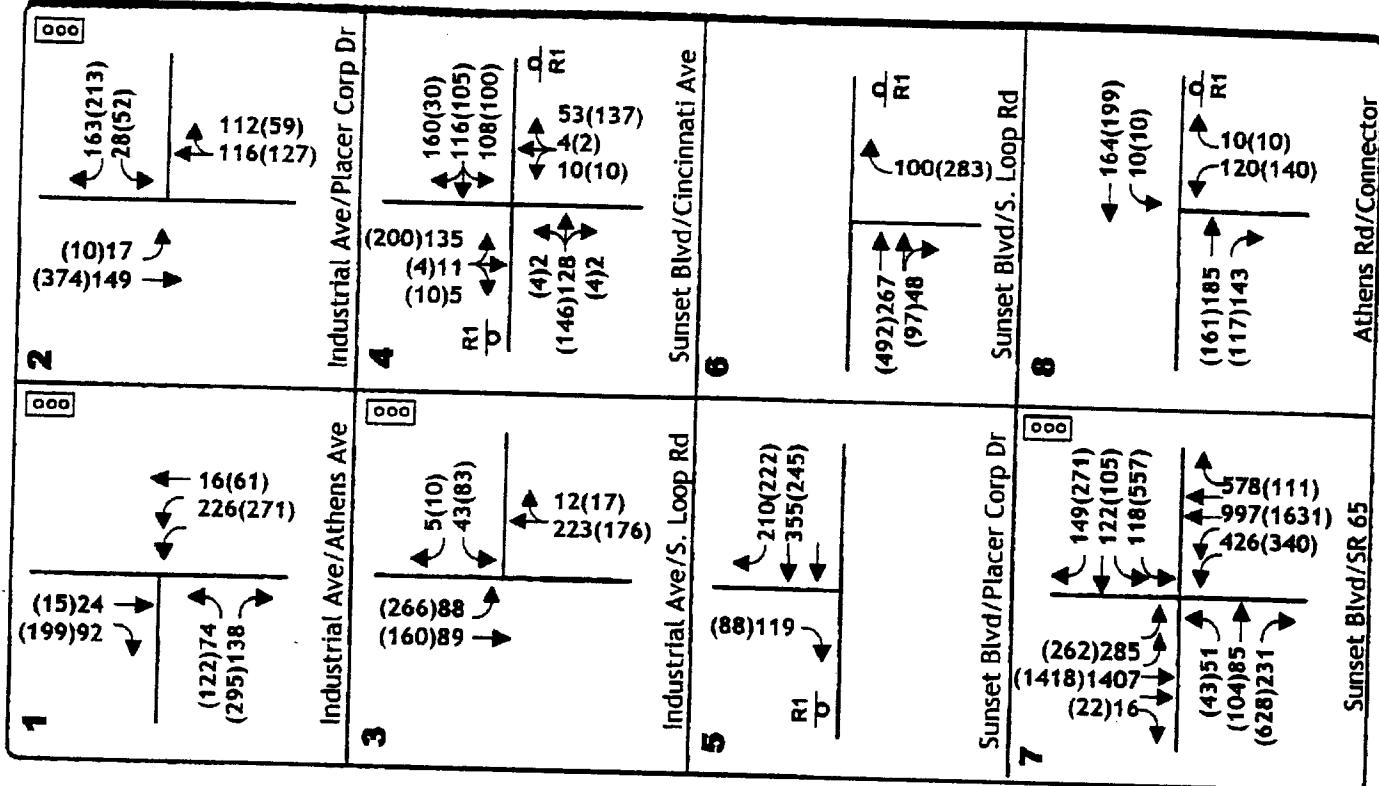


figure 2

figure 3



**TABLE 4**  
**EXISTING PLUS PROJECT**  
**INTERSECTION LEVEL OF SERVICE**

Intersection	Control	Movement	Existing No Project Conditions				Existing Plus Project Conditions			
			AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
			Delay LOS	Delay (sec)	Delay LOS	Delay (sec)	Delay LOS	Delay (sec)	Delay LOS	Delay (sec)
1) Industrial Ave / Athens Ave	Signal	All	B	13.5	B	15.2	B	14.1	B	15.2
2) Industrial Ave / Placer Corporate Dr	Signal	All	B	17.2	B	16.7	B	17.6	B	15.7
3) Industrial Ave / South Loop Rd	Signal	All	B	14.9	B	17.9	B	16.6	C	20.2
4) Sunset Blvd / Cincinnati Ave	Minor Stop	All Worst	A C	8.9 19.9	B C	14.2 23.3	B F	14.1 57.2	D F	34.0 107.7
5) Sunset Blvd / Placer Corporate Dr	Minor Stop	All Worst	A A	1.5 9.5	A A	1.1 8.9	A B	1.7 10.0	A A	1.5 9.4
6) Sunset Blvd / South Loop Rd	Minor Stop	All Worst	A A	3.6 9.4	A B	6.0 15.0	A A	2.3 9.6	A C	5.1 16.2
7) Sunset Blvd / SR-65	Signal	All	C	23.3	D	41.4	C	24.5	D	42.3
8) Athens Ave / Athens Connector	Minor Stop	All Worst	---	---	---	---	A B	2.7 12.6	A B	3.2 13.2

Note: Shaded area indicates impact location.

As shown in the above table, all of the study intersections are projected to continue operating acceptably under Existing Plus Project conditions, with the exception of the Sunset Boulevard / Cincinnati Avenue intersection. This intersection would operate at an overall LOS of D and a worst movement of LOS F during the PM peak hour. Detailed level of service analysis data is attached.

#### **Mitigation for Existing Plus Project Conditions**

The intersection of Sunset Boulevard and Cincinnati Avenue will require improvements to operate at an acceptable level of service under Existing Plus Project conditions. This intersection will meet the MUTCD Peak Hour Warrant, and signalization is recommended as mitigation. In addition to the installation of the traffic signal, the intersection should be reconfigured to allow

for separate left-turn lanes on each approach. With these mitigation measures, this intersection will operate at LOS C.

## TRAFFIC IMPACTS – CUMULATIVE CONDITIONS

Traffic impacts were evaluated in terms of impacts at study intersections for Cumulative No Project and Cumulative Plus Project conditions.

### Cumulative Baseline Improvements

Numerous roadway improvements are scheduled within the project study area over the next 20 years, as outlined within the *Auburn Rancheria Casino DEIR*. These improvements include:

- Extension of Foothills Boulevard north to Sunset Boulevard,
- Construction of the SR-65 Lincoln Bypass around the west side of Lincoln, which will include connection to a partial interchange with Industrial Avenue,
- Construction of a new freeway interchange at Sunset Boulevard/SR-65, and
- Extension of Sunset Boulevard west from Cincinnati Avenue to Foothills Boulevard.

Intersection geometrics at the study intersections for cumulative conditions, also as included within the Auburn Rancheria DEIR, are depicted in **Figure 4**.

### Cumulative No Project Conditions

#### Intersection Volumes

Intersection volumes for Cumulative conditions were established through use of the Placer County model, as described previously. The model was modified as needed to assure that the following developments were included: (1) W. Roseville Specific Plan, (2) Placer Vineyards, (3) Placer Ranch, and (4) De Salle University.

The traffic model yields only PM peak hour volumes. Because of the absence of an AM model, and that this and previous studies have consistently shown intersection impacts in this area to be higher during the PM peak hour, no AM peak hour analysis was performed under Cumulative conditions. PM Peak hour volumes for Cumulative No Project conditions are depicted in **Figure 4**.

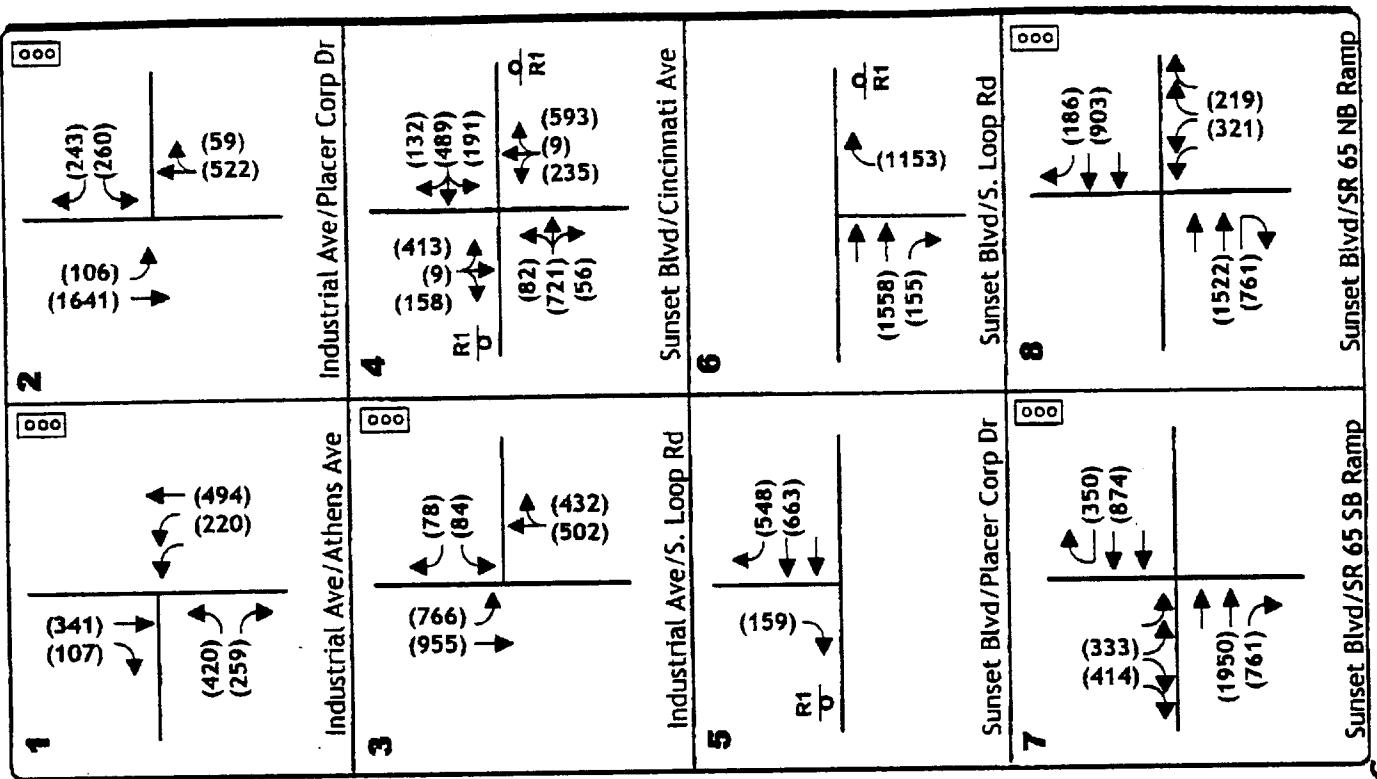
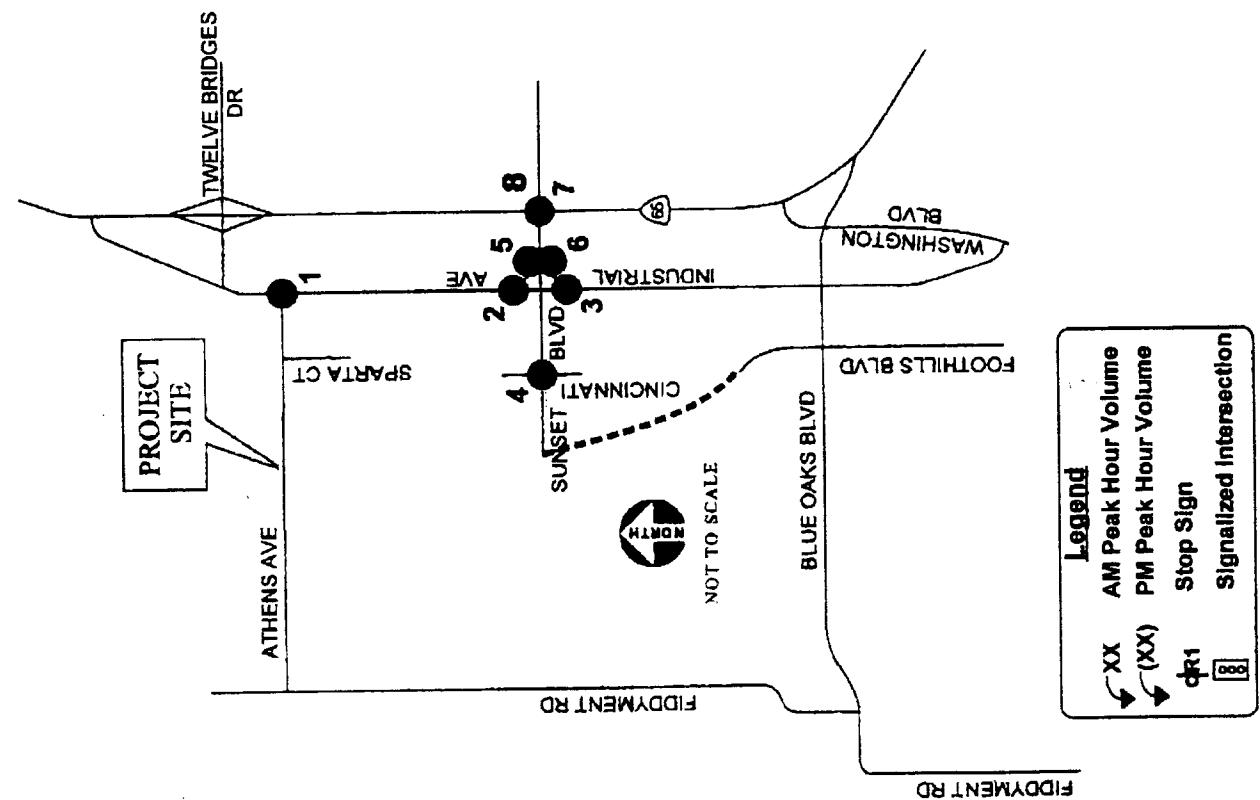


figure 4



## CUMULATIVE NO PROJECT TRAFFIC VOLUMES AND LANE CONFIGURATIONS

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### **Intersection Operations**

Intersection levels of service for Cumulative No Project conditions were calculated for each study intersection, and are summarized in **Table 5**.

**TABLE 5**  
**CUMULATIVE NO PROJECT**  
**INTERSECTION LEVEL OF SERVICE**

Intersection	Control & Geometry	Movement	PM Peak Hour	
			LOS	Delay (sec)
1) Industrial Ave / Athens Ave	Signal	All	C	22.7
2) Industrial Ave / Placer Corporate Dr	Signal	All	E	59.3
3) Industrial Ave / South Loop Rd	Signal	All	C	31.3
4) Sunset Blvd / Cincinnati Ave	Minor Stop	All Worst	F F	>100 >100
5) Sunset Blvd / Placer Corporate Dr	Minor Stop	All Worst	A B	1.4 11.9
6) Sunset Blvd / South Loop Rd	Minor Stop	All Worst	F F	>100 >100
7) Sunset Blvd / SB SR-65 Ramps	Signal	All	B	12.8
8) Sunset Boulevard / NB SR-65 Ramps	Signal	All	A	9.6

Note: Shaded area indicates impact location.

As shown in the above table, three study intersections are projected to operate unacceptably under Cumulative No Project conditions. These intersections are:

- Industrial Avenue / Placer Corporate Drive,
- Sunset Boulevard / Cincinnati Avenue, and
- Sunset Boulevard / South Loop Road.

### Mitigation for Cumulative No Project Conditions

The following mitigation measures are recommended for Cumulative No Project Conditions:

**Industrial Avenue / Placer Corporate Drive.** This intersection would operate at LOS E under Cumulative No Project conditions. Improvements at this location would be problematic because of constraints posed by the railroad tracks and the Sunset Boulevard overcrossing. Because the LOS at this location is improved with the construction of the project, no recommendation is presented for the Cumulative No Project condition.

**Sunset Boulevard / Cincinnati Avenue.** This intersection would operate at LOS F under Cumulative No Project conditions. The intersection would meet signal warrants, and installation of a traffic signal is recommended. In addition, the eastbound and westbound approaches would require two through lanes. The northbound approach would require 2 right turn lanes, and the southbound approach would require two left turn lanes. These improvements would result in LOS C.

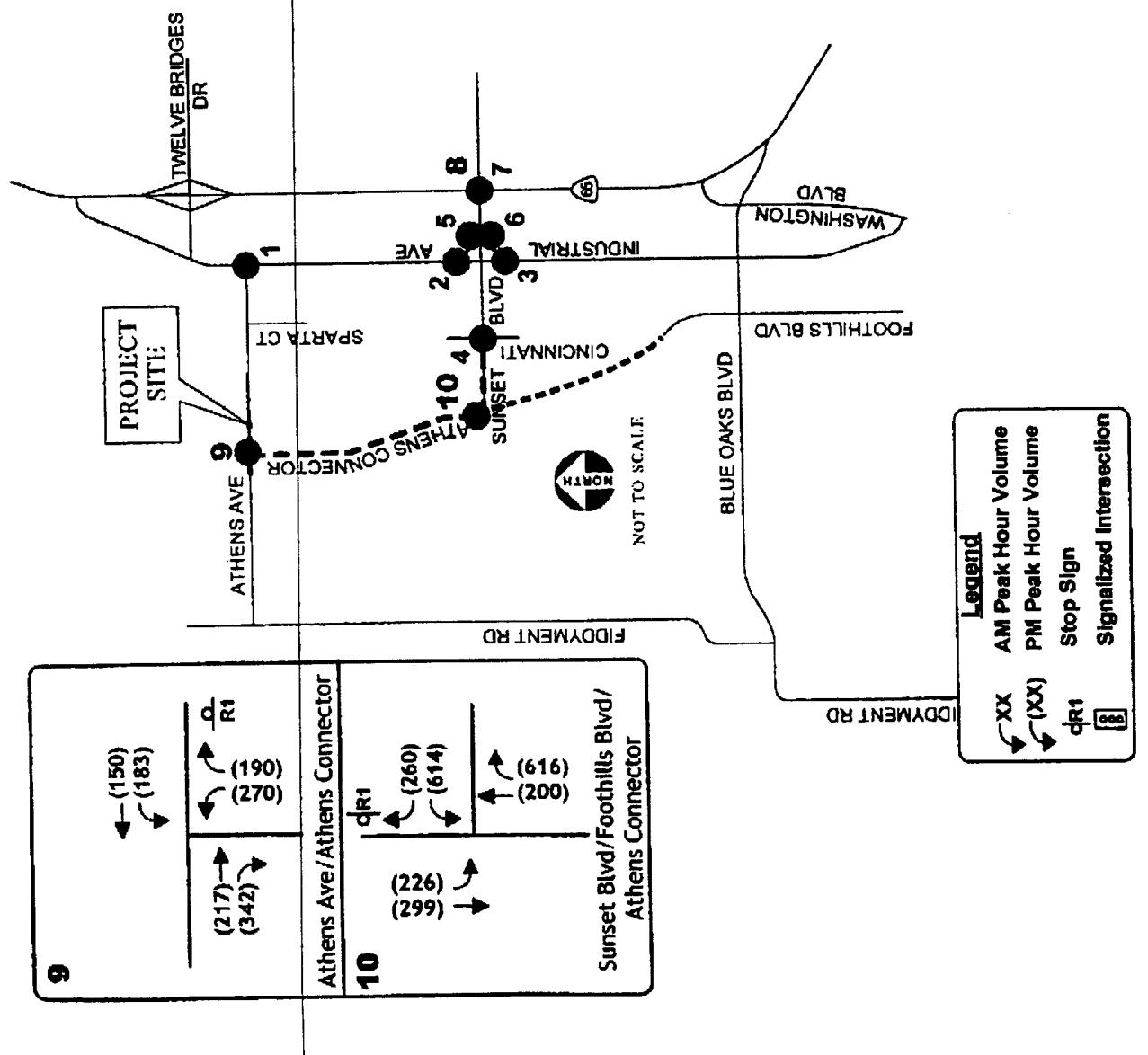
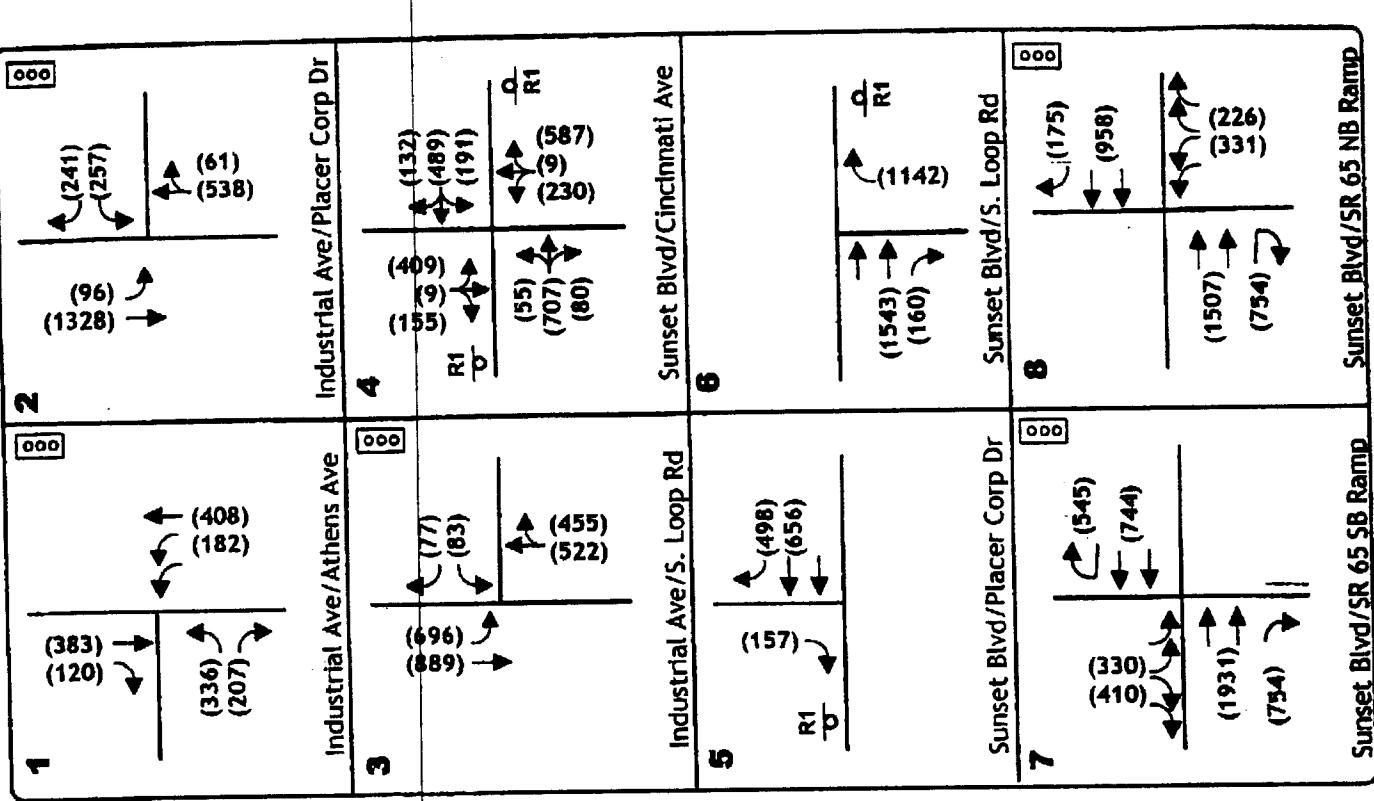
**Sunset / South Loop Road.** This intersection would operate at LOS F under Cumulative No Project conditions. Sunset Boulevard would require widening and striping east of South Loop Road to provide an exclusive receiving lane such that the rightmost northbound right turn lane functions as a “free” right turn lane. Dual northbound right turn lanes should be provided, with rightmost lane serving as an auxiliary lane for the southbound SR 65 on-ramp. These improvements would result in level of service C or better conditions.

### Cumulative Plus Project Conditions

The same basic area land use and circulation assumptions identified in the Cumulative No Project condition were included in the analysis of Cumulative Plus Project conditions. Under Cumulative Plus Project conditions, the Athens Connector is assumed to connect to the Foothills Boulevard extension at a three-way intersection with Sunset Boulevard.

### **Intersection Operations**

PM peak hour traffic volumes with the Athens Connector are shown in **Figure 5**. Intersection levels of service for Cumulative Plus Project conditions were calculated for the study intersections, and are summarized in **Table 6**.



**TABLE 6**  
**CUMULATIVE PLUS PROJECT**  
**INTERSECTION LEVEL OF SERVICE**

Intersection	Control & Geometry	Movement	PM Peak Hour	
			LOS	Delay (sec)
1) Industrial Ave / Athens Ave	Signal	All	C	21.1
2) Industrial Ave / Placer Corporate Dr	Signal	All	D	40.0
3) Industrial Ave / South Loop Rd	Signal	All	C	28.6
4) Sunset Blvd / Cincinnati Ave	Minor Stop	All Worst	F F	>100 >100
5) Sunset Blvd / Placer Corporate Dr	Minor Stop	All Worst	A B	1.4 11.8
6) Sunset Blvd / South Loop Rd	Minor Stop	All Worst	F F	>100 >100
7) Sunset Blvd / SB SR-65 Ramps	Signal	All	B	17.6
8) Sunset Boulevard / NB SR-65 Ramps	Signal	All	A	12.2
9) Athens Avenue / Athens Connector	Minor Stop	All Worst	C E	17.0 46.1
10) Sunset Blvd. / Foothills Blvd. / Athens Conn.	Minor Stop	All Worst	F F	>100 >100

Note: Shaded area indicates impact location.

As shown in the above table, three of the study intersections are projected to operate at unacceptable LOS F under Cumulative Plus Project PM peak hour conditions. Detailed level of service analysis data is attached. These intersections are:

- Sunset Boulevard / Cincinnati Avenue,
- Sunset / South Loop Road, and
- Sunset Boulevard / Foothills Boulevard / Athens Connector.

## Mitigation

The following mitigation measures are recommended for Cumulative Plus Project conditions:

**Sunset Boulevard / Cincinnati Avenue.** This intersection would operate at LOS F under Cumulative Plus Project conditions. The intersection would meet signal warrants, and installation of a traffic signal is recommended. In addition, the eastbound and westbound approaches would require two through lanes. The northbound approach would require 2 northbound right turn lanes, and the southbound approach would require two left turn lanes. These improvements would result in LOS C.

**Sunset / South Loop Road.** This intersection would operate at LOS F under Cumulative Plus Project conditions. Sunset Boulevard would require widening and striping east of South Loop Road to provide an exclusive receiving lane such that the rightmost northbound right turn lane functions as a “free” right turn lane. Dual northbound right turn lanes should be provided, with rightmost lane serving as an auxiliary lane for the southbound SR 65 on-ramp. These improvements would result in level of service C or better conditions.

**Sunset Boulevard / Foothills Boulevard / Athens Connector.** This intersection would operate at LOS F under Cumulative Plus Project Conditions. The intersection would meet peak hour warrants, and signalization is recommended. The southbound and northbound approaches would require exclusive through and separate turning lanes, while the westbound approach would require 2 left turn lanes, and a separate left turn lane. Resulting LOS at this intersection with mitigation would be C.

**Athens Avenue / Athens Connector.** While this intersection would operate at an overall LOS C under Cumulative Plus Project Conditions, the worst case movement will be LOS F, and it will meet signal warrants. Installation of a traffic signal at this location is recommended. All approaches should include separate single lanes for each movement.

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## **CONCLUSION**

Development of the proposed project will generally improve overall traffic operating conditions in the study area by providing additional north-south roadway capacity. With the connector, all study intersections can be mitigated to acceptable levels under cumulative growth conditions that include development throughout the region as well as full development of the Sunset Industrial Plan area.

The mitigation measures identified for the Athens Connector will be included in an update to the Sunset Industrial area Capital Improvement Program, and financed by future development through the payment of their fair-share traffic fees.

Please do not hesitate to contact me if you have any questions.

Sincerely,

**kdANDERSON Transportation Engineers**

Gary N. Hansen.  
Senior Transportation Planner

Attachments

**EXISTING CONDITIONS  
LEVEL OF SERVICE CALCULATIONS**

Existing AM

Thu Sep 2, 2004 10:37:57

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## Athens Connector

## Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

Intersection #1 Industrial / Athens

Cycle (sec): 100 Critical Vol./Cap. (X): 0.169  
 Loss Time (sec): 9 (Y+R = 4 sec) Average Delay (sec/veh): 13.5  
 Optimal Cycle: 26 Level Of Service: B

Approach:	North Bound			South Bound			East Bound			West Bound		
	Movement:	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Protected	Protected	Protected	Protected	Protected	Protected	Protected	Protected	Protected	Protected	Protected	
Rights:	Include	Ovl	Ovl	Include								
Min. Green:	3	7	0	0	7	7	7	0	7	0	0	
Lanes:	2	0	1	0	0	1	1	0	0	1	0	

## Volume Module:

Base Vol:	206	18	0	0	26	92	74	0	189	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	206	18	0	0	26	92	74	0	189	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
PHF Volume:	230	20	0	0	29	103	83	0	211	0	0	0
Reduc Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	230	20	0	0	29	103	83	0	211	0	0	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	230	20	0	0	29	103	83	0	211	0	0	0

## Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.88	0.95	1.00	1.00	0.95	0.81	0.90	1.00	0.81	1.00	1.00	1.00
Lanes:	2.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00	0.00	0.00	0.00
Final Sat.:	3334	1809	0	0	1809	1537	1718	0	1537	0	0	0

## Capacity Analysis Module:

Vol/Sat:	0.07	0.01	0.00	0.00	0.02	0.07	0.05	0.00	0.14	0.00	0.00	0.00
Crit Moves:	****		****			****			****			
Green/Cycle:	0.41	0.50	0.00	0.00	0.10	0.50	0.41	0.00	0.81	0.00	0.00	0.00
Volume/Cap:	0.17	0.02	0.00	0.00	0.17	0.13	0.12	0.00	0.17	0.00	0.00	0.00
Delay/Veh:	18.8	12.4	0.0	0.0	42.1	13.5	18.7	0.0	2.1	0.0	0.0	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	18.8	12.4	0.0	0.0	42.1	13.5	18.7	0.0	2.1	0.0	0.0	0.0
HCM2kAvg:	2	0	0	0	1	2	2	0	1	0	0	0

## Athens Connector

## Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

Intersection #2 Industrial / Placer Corp Center

Cycle (sec): 100 Critical Vol./Cap. (X): 0.266  
 Loss Time (sec): 9 (Y+R = 4 sec) Average Delay (sec/veh): 17.2  
 Optimal Cycle: 25 Level Of Service: B

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Protected	Protected	Protected	Protected
Rights:	Include	Include	Include	Ovl
Min. Green:	0 7 7	3 7 0	0 0 0	3 0 3
Lanes:	0 0 1 0 1	1 0 1 0 0	0 0 0 0 0	1 0 0 0 1

## Volume Module:

Base Vol:	0 128 83 21 200	0 0 0 0 0	28 0 180
Growth Adj:	1.00 1.00 1.00 1.00 1.00	1.00 1.00 1.00 1.00 1.00	1.00 1.00 1.00 1.00 1.00
Initial Bse:	0 128 83 21 200	0 0 0 0 0	28 0 180
User Adj:	1.00 1.00 1.00 1.00 1.00	1.00 1.00 1.00 1.00 1.00	1.00 1.00 1.00 1.00 1.00
PHF Adj:	0.89 0.89 0.89 0.89 0.89	0.89 0.89 0.89 0.89 0.89	0.89 0.89 0.89 0.89 0.89
PHF Volume:	0 144 93 24 224	0 0 0 0 0	31 0 202
Reduc Vol:	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0
Reduced Vol:	0 144 93 24 224	0 0 0 0 0	31 0 202
PCE Adj:	1.00 1.00 1.00 1.00 1.00	1.00 1.00 1.00 1.00 1.00	1.00 1.00 1.00 1.00 1.00
MLF Adj:	1.00 1.00 1.00 1.00 1.00	1.00 1.00 1.00 1.00 1.00	1.00 1.00 1.00 1.00 1.00
Final Vol.:	0 144 93 24 224	0 0 0 0 0	31 0 202

## Saturation Flow Module:

Sat/Lane:	1900 1900 1900 1900 1900	1900 1900 1900 1900 1900	1900 1900 1900 1900 1900
Adjustment:	1.00 0.95 0.81 0.90 0.95	1.00 1.00 1.00 1.00 1.00	0.90 1.00 0.81
Lanes:	0.00 1.00 1.00 1.00 1.00	0.00 0.00 0.00 0.00 0.00	1.00 0.00 1.00
Final Sat.:	0 1809 1537 1718 1809	0 0 0 0 0	1718 0 1537

## Capacity Analysis Module:

Vol/Sat:	0.00 0.08 0.06 0.01 0.12	0.00 0.00 0.00 0.00 0.00	0.00 0.02 0.00 0.13
Crit Moves:	****	****	****
Green/Cycle:	0.00 0.47 0.47 0.03 0.50	0.00 0.00 0.00 0.00 0.00	0.41 0.00 0.44
Volume/Cap:	0.00 0.17 0.13 0.46 0.25	0.00 0.00 0.00 0.00 0.00	0.04 0.00 0.30
Delay/Veh:	0.0 15.3 15.0 54.0 14.4	0.0 0.0 0.0 0.0 0.0	17.8 0.0 18.4
User DelAdj:	1.00 1.00 1.00 1.00 1.00	1.00 1.00 1.00 1.00 1.00	1.00 1.00 1.00 1.00 1.00
AdjDel/Veh:	0.0 15.3 15.0 54.0 14.4	0.0 0.0 0.0 0.0 0.0	17.8 0.0 18.4
HCM2kAvg:	0 2 2 1 4	0 0 0 0 0	1 0 4

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## Athens Connector

## Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

Intersection #3 Industrial / S. Loop

Cycle (sec):	100	Critical Vol./Cap. (X):	0.258		
Loss Time (sec):	9 (Y+R = 4 sec)	Average Delay (sec/veh):	14.9		
Optimal Cycle:	24	Level Of Service:	B		
Approach:	North Bound	South Bound	East Bound	West Bound	
Movement:	L - T - R	L - T - R	L - T - R	L - T - R	
Control:	Protected	Protected	Permitted	Permitted	
Rights:	Include	Include	Include	Ovl	
Min. Green:	0 7 7	3 7 0	0 0 0	3 0 3	
Lanes:	0 0 1 0 1	1 0 1 0 0	0 0 0 0 0	1 0 0 0 1	
Volume Module:					
Base Vol:	0 206 12 112 122	0	0 0 0	24 0 5	
Growth Adj:	1.00 1.00 1.00 1.00 1.00	1.00 1.00 1.00 1.00 1.00	1.00 1.00 1.00 1.00 1.00	1.00 1.00 1.00 1.00 1.00	
Initial Bse:	0 206 12 112 122	0	0 0 0	24 0 5	
User Adj:	1.00 1.00 1.00 1.00 1.00	1.00 1.00 1.00 1.00 1.00	1.00 1.00 1.00 1.00 1.00	1.00 1.00 1.00 1.00 1.00	
PHF Adj:	0.84 0.84 0.84 0.84 0.84	0.84 0.84 0.84 0.84 0.84	0.84 0.84 0.84 0.84 0.84	0.84 0.84 0.84 0.84 0.84	
PHF Volume:	0 246 14 134 146	0	0 0 0	29 0 6	
Reduc Vol:	0 0 0 0 0	0	0 0 0	0 0 0	
Reduced Vol:	0 246 14 134 146	0	0 0 0	29 0 6	
PCE Adj:	1.00 1.00 1.00 1.00 1.00	1.00 1.00 1.00 1.00 1.00	1.00 1.00 1.00 1.00 1.00	1.00 1.00 1.00 1.00 1.00	
MLF Adj:	1.00 1.00 1.00 1.00 1.00	1.00 1.00 1.00 1.00 1.00	1.00 1.00 1.00 1.00 1.00	1.00 1.00 1.00 1.00 1.00	
Final Vol.:	0 246 14 134 146	0	0 0 0	29 0 6	
Saturation Flow Module:					
Sat/Lane:	1900 1900 1900 1900 1900	1900 1900 1900 1900 1900	1900 1900 1900 1900 1900	1900 1900 1900 1900 1900	
Adjustment:	1.00 0.95 0.81 0.90 0.95	1.00 1.00 1.00 1.00 1.00	1.00 0.74 1.00 0.81		
Lanes:	0.00 1.00 1.00 1.00 1.00	0.00 0.00 0.00 0.00 0.00	1.00 0.00 1.00 0.00 1.00		
Final Sat.:	0 1809 1537 1718 1809	0 0 0 0 0	1405 0 1537		
Capacity Analysis Module:					
Vol/Sat:	0.00 0.14 0.01 0.08 0.08	0.00 0.00 0.00 0.00 0.00	0.00 0.02 0.00 0.00 0.00		
Crit Moves:	****	****	****		
Green/Cycle:	0.00 0.53 0.53 0.30 0.83	0.00 0.00 0.00 0.00 0.00	0.00 0.08 0.00 0.00 0.38		
Volume/Cap:	0.00 0.26 0.02 0.26 0.10	0.00 0.00 0.00 0.00 0.00	0.00 0.26 0.00 0.00 0.01		
Delay/Veh:	0.0 13.0 11.2 26.7 1.6	0.0 0.0 0.0 0.0 0.0	0.0 44.5 0.0 19.2		
User DelAdj:	1.00 1.00 1.00 1.00 1.00	1.00 1.00 1.00 1.00 1.00	1.00 1.00 1.00 1.00 1.00		
AdjDel/Veh:	0.0 13.0 11.2 26.7 1.6	0.0 0.0 0.0 0.0 0.0	0.0 44.5 0.0 19.2		
HCM2kAvg:	0 4 0 3 1	0 0 0 0 0	1 0 0		

## Athens Connector

## Level Of Service Computation Report

2000 HCM Unsigned Method (Base Volume Alternative)

Intersection #4 Sunset / Cincinnati

Average Delay (sec/veh): 8.9 Worst Case Level Of Service: C[ 19.9]

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

Control: Stop Sign Stop Sign Uncontrolled Uncontrolled

Rights: Include Include Include Include

Lanes: 0 0 0 1 0 0 1 0 0 0 0 1 0 0 0 0 1! 0 0

## Volume Module:

Base Vol: 0 4 53 135 11 0 0 1 0 108 1 160

Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Initial Bse: 0 4 53 135 11 0 0 1 0 108 1 160

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 0.73 0.73 0.73 0.73 0.73 0.73 0.73 0.73 0.73 0.73 0.73 0.73

PHF Volume: 0 6 73 186 15 0 0 1 0 149 1 221

Reduc Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Final Vol.: 0 6 73 186 15 0 0 1 0 149 1 221

## Critical Gap Module:

Critical Gp:xxxxx 6.6 6.3 7.2 6.6 xxxxx xxxxx xxxxx xxxxx 4.1 xxxx xxxx

FollowUpTim:xxxxx 4.0 3.3 3.5 4.0 xxxxx xxxxx xxxxx xxxxx 2.2 xxxx xxxx

## Capacity Module:

Cnflct Vol: xxxx 521 1 450 411 xxxxx xxxx xxxx xxxx 1 xxxx xxxx

Potent Cap.: xxxx 455 1074 514 526 xxxxx xxxx xxxx xxxx 1602 xxxx xxxx

Move Cap.: xxxx 409 1074 437 473 xxxxx xxxx xxxx xxxx 1602 xxxx xxxx

Volume/Cap: xxxx 0.01 0.07 0.43 0.03 xxxx xxxx xxxx 0.09 xxxx xxxx

## Level Of Service Module:

Queue: xxxxx xxxx xxxxx xxxx xxxx xxxx xxxx xxxx 0.3 xxxx xxxx

Stopped Del:xxxxx xxxx xxxxx xxxx xxxx xxxx xxxx 7.5 xxxx xxxx

LOS by Move: \* \* \* \* \* \* \* \* \* A \* \*

Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT

Shared Cap.: xxxx xxxx 964 440 xxxx xxxxx xxxx xxxx xxxx xxxx xxxx xxxx

SharedQueue:xxxxx xxxx 0.3 2.3 xxxx xxxxx xxxx xxxx xxxx xxxx xxxx xxxx

Shrd StpDel:xxxxx xxxx 9.1 19.9 xxxx xxxxx xxxx xxxx xxxx xxxx xxxx xxxx

Shared LOS: \* \* A C \* \* \* \* \* \* \* \* \*

ApproachDel: 9.1 19.9 xxxxxx xxxxxx

ApproachLOS: A C \* \*

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Athens Connector

Level Of Service Computation Report

2000 HCM Unsignalized Method (Base Volume Alternative)

\*\*\*\*\*  
Intersection #5 Sunset / Placer Corp Center  
\*\*\*\*\*  
Average Delay (sec/veh): 1.5 Worst Case Level Of Service: A[ 9.5]  
\*\*\*\*\*  
Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R  
-----|-----|-----|-----|-----|-----|-----|-----|  
Control: Stop Sign Stop Sign Uncontrolled Uncontrolled  
Rights: Include Include Include Include  
Lanes: 0 0 0 0 0 0 0 0 1 0 0 0 0 0 0 0 2 0 1  
-----|-----|-----|-----|-----|-----|-----|-----|  
Volume Module:  
Base Vol: 0 0 0 0 90 0 0 0 0 0 269 228  
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
Initial Bse: 0 0 0 0 90 0 0 0 0 0 269 228  
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
PHF Adj: 0.93 0.93 0.93 0.93 0.93 0.93 0.93 0.93 0.93 0.93 0.93 0.93  
PHF Volume: 0 0 0 0 97 0 0 0 0 0 290 246  
Reduc Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0  
Final Vol.: 0 0 0 0 97 0 0 0 0 0 290 246  
-----|-----|-----|-----|-----|-----|-----|-----|  
Critical Gap Module:  
Critical Gp:xxxxx xxxx xxxx xxxx xxxx 6.3 xxxx xxxx xxxx xxxx xxxx xxxx  
FollowUpTim:xxxxx xxxx xxxx xxxx xxxx 3.3 xxxx xxxx xxxx xxxx xxxx xxxx  
-----|-----|-----|-----|-----|-----|-----|-----|  
Capacity Module:  
Cnflct Vol: xxxx xxxx xxxx xxxx 145 xxxx xxxx xxxx xxxx xxxx xxxx  
Potent Cap.: xxxx xxxx xxxx xxxx 894 xxxx xxxx xxxx xxxx xxxx xxxx  
Move Cap.: xxxx xxxx xxxx xxxx 894 xxxx xxxx xxxx xxxx xxxx xxxx  
Volume/Cap: xxxx xxxx xxxx xxxx 0.11 xxxx xxxx xxxx xxxx xxxx xxxx  
-----|-----|-----|-----|-----|-----|-----|-----|  
Level Of Service Module:  
Queue: xxxx xxxx xxxx xxxx xxxx 0.4 xxxx xxxx xxxx xxxx xxxx xxxx  
Stopped Del:xxxxx xxxx xxxx xxxx xxxx 9.5 xxxx xxxx xxxx xxxx xxxx xxxx  
LOS by Move: \* \* \* \* \* A \* \* \* \* \* \* \* \*  
Movement: LT - LTR - RT  
Shared Cap.: xxxx  
SharedQueue:xxxxx xxxx  
Shrd StpDel:xxxxx xxxx  
Shared LOS: \* \* \* \* \* \* \* \* \* \* \* \* \* \*  
ApproachDel: xxxxxx 9.5 xxxxxxxx xxxxxxxx  
ApproachLOS: \* A \* \* \*

## Athens Connector

## Level Of Service Computation Report

2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #6 Sunset / S. Loop

Average Delay (sec/veh): 3.6 Worst Case Level Of Service: A[ 9.4]

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

Control: Stop Sign Stop Sign Uncontrolled Uncontrolled

Rights: Include Include Include Include

Lanes: 0 0 0 0 1 0 0 0 0 0 0 2 0 1 0 0 0 0 0

## Volume Module:

Base Vol: 0 0 124 0 0 0 0 173 29 0 0 0 0

Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Initial Bse: 0 0 124 0 0 0 0 173 29 0 0 0 0

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 0.93 0.93 0.93 0.93 0.93 0.93 0.93 0.93 0.93 0.93 0.93 0.93 0.93

PHF Volume: 0 0 134 0 0 0 0 186 31 0 0 0 0

Reduc Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0 0

Final Vol.: 0 0 134 0 0 0 0 186 31 0 0 0 0

## Critical Gap Module:

Critical Gp:xxxxx xxxx 6.3 xxxxx xxxx xxxx xxxx xxxx xxxx xxxx xxxx xxxx xxxx

FollowUpTim:xxxxx xxxx 3.3 xxxxx xxxx xxxx xxxx xxxx xxxx xxxx xxxx xxxx

## Capacity Module:

Cnflct Vol: xxxx xxxx 93 xxxx xxxx xxxx xxxx xxxx xxxx xxxx xxxx xxxx

Potent Cap.: xxxx xxxx 956 xxxx xxxx xxxx xxxx xxxx xxxx xxxx xxxx

Move Cap.: xxxx xxxx 956 xxxx xxxx xxxx xxxx xxxx xxxx xxxx xxxx

Volume/Cap: xxxx xxxx 0.14 xxxx xxxx xxxx xxxx xxxx xxxx xxxx xxxx

## Level Of Service Module:

Queue: xxxxx xxxx 0.5 xxxxx xxxx xxxx xxxx xxxx xxxx xxxx xxxx xxxx

Stopped Del:xxxxx xxxx 9.4 xxxxx xxxx xxxx xxxx xxxx xxxx xxxx xxxx

LOS by Move: \* \* A \* \* \* \* \* \* \* \* \* \*

Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT

Shared Cap.: xxxx xxxx xxxx xxxx xxxx xxxx xxxx xxxx xxxx xxxx

SharedQueue:xxxxx xxxx xxxx xxxx xxxx xxxx xxxx xxxx xxxx xxxx

Shrd StpDel:xxxxx xxxx xxxx xxxx xxxx xxxx xxxx xxxx xxxx xxxx

Shared LOS: \* \* \* \* \* \* \* \* \* \* \* \*

ApproachDel: 9.4 xxxxxx xxxxxxxx xxxxxxxx

ApproachLOS: A \* \* \*

## Athens Connector

## Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

Intersection #7 Sunset / SR-65

Cycle (sec): 100 Critical Vol./Cap. (X): 0.763  
 Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 23.3  
 Optimal Cycle: 69 Level Of Service: C

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Protected	Protected	Protected	Protected
Rights:	Ovl	Ovl	Ignore	Ovl
Min. Green:	3 7	3 7	3 7	3 7
Lanes:	2 0 2 0 1	2 0 2 0 1	1 0 1 0 1	2 0 2 0 1

## Volume Module:

Base Vol:	373	1001	578	285	1439	16	51	63	173	118	106	149
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	373	1001	578	285	1439	16	51	63	173	118	106	149
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Adj:	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.00	0.90	0.90	0.90
PHF Volume:	417	1118	646	318	1608	18	57	70	0	132	118	166
Reduc Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	417	1118	646	318	1608	18	57	70	0	132	118	166
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Final Vol.:	417	1118	646	318	1608	18	57	70	0	132	118	166

## Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.88	0.90	0.81	0.88	0.90	0.81	0.90	0.95	1.00	0.88	0.90	0.81
Lanes:	2.00	2.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00	2.00	2.00	1.00
Final Sat.:	3334	3437	1537	3334	3437	1537	1718	1809	1900	3334	3437	1537

## Capacity Analysis Module:

Vol/Sat:	0.13	0.33	0.42	0.10	0.47	0.01	0.03	0.04	0.00	0.04	0.03	0.11
Crit Moves:	****		****		****		****		****		****	
Green/Cycle:	0.16	0.61	0.66	0.15	0.60	0.65	0.05	0.07	0.00	0.05	0.07	0.22
Volume/Cap:	0.78	0.54	0.64	0.63	0.78	0.02	0.65	0.56	0.00	0.78	0.49	0.49
Delay/Veh:	47.6	11.7	11.5	42.2	17.1	6.2	63.2	50.4	0.0	67.4	46.4	35.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	47.6	11.7	11.5	42.2	17.1	6.2	63.2	50.4	0.0	67.4	46.4	35.0
HCM2kAvg:	8	10	12	6	20	0	3	3	0	4	2	5

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## Athens Connector

## Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

\*\*\*\*\*  
 Intersection #1 Industrial / Athens  
 \*\*\*\*\*

Cycle (sec):	100	Critical Vol./Cap. (X):	0.358	
Loss Time (sec):	9 (Y+R = 4 sec)	Average Delay (sec/veh):	15.2	
Optimal Cycle:	28	Level Of Service:	B	
*****				
Approach:	North Bound	South Bound	East Bound	
Movement:	L - T - R	L - T - R	L - T - R	
	-----	-----	-----	-----
Control:	Protected	Protected	Protected	Protected
Rights:	Include	Ovl	Ovl	Include
Min. Green:	3 7 0	0 7 7	7 0 7	0 0 0
Lanes:	2 0 1 0 0	0 0 1 0 1	1 0 0 0 1	0 0 0 0 0
----- ----- ----- -----				
Volume Module:				
Base Vol:	316 63 0 0 17	200 122 0 339 0 0 0	0 0 0	
Growth Adj:	1.00 1.00 1.00 1.00 1.00	1.00 1.00 1.00 1.00 1.00	1.00 1.00 1.00	
Initial Bse:	316 63 0 0 17	200 122 0 339 0 0 0	0 0 0	
User Adj:	1.00 1.00 1.00 1.00 1.00	1.00 1.00 1.00 1.00 1.00	1.00 1.00 1.00	
PHF Adj:	0.86 0.86 0.86 0.86 0.86	0.86 0.86 0.86 0.86 0.86	0.86 0.86 0.86	
PHF Volume:	368 73 0 0 20	233 142 0 395 0 0 0	0 0 0	
Reduc Vol:	0 0 0 0 0	0 0 0 0 0	0 0 0	
Reduced Vol:	368 73 0 0 20	233 142 0 395 0 0 0	0 0 0	
PCE Adj:	1.00 1.00 1.00 1.00 1.00	1.00 1.00 1.00 1.00 1.00	1.00 1.00 1.00	
MLF Adj:	1.00 1.00 1.00 1.00 1.00	1.00 1.00 1.00 1.00 1.00	1.00 1.00 1.00	
Final Vol.:	368 73 0 0 20	233 142 0 395 0 0 0	0 0 0	
----- ----- ----- -----				
Saturation Flow Module:				
Sat/Lane:	1900 1900 1900 1900 1900	1900 1900 1900 1900 1900	1900 1900 1900	
Adjustment:	0.88 0.95 1.00 1.00 0.95	0.81 0.90 1.00 0.81 1.00	1.00 1.00 1.00	
Lanes:	2.00 1.00 0.00 0.00 1.00	1.00 1.00 0.00 1.00 0.00	0.00 0.00 0.00	
Final Sat.:	3334 1809 0 0 1809	1537 1718 0 1537 0 0 0	0 0 0	
----- ----- ----- -----				
Capacity Analysis Module:				
Vol/Sat:	0.11 0.04 0.00 0.00 0.01	0.15 0.08 0.00 0.26 0.00 0.00 0.00	0.00 0.00 0.00	
Crit Moves:	****	****	****	
Green/Cycle:	0.31 0.50 0.00 0.00 0.19	0.60 0.41 0.00 0.72 0.00 0.00 0.00	0.00 0.00 0.00	
Volume/Cap:	0.36 0.08 0.00 0.00 0.06	0.25 0.20 0.00 0.36 0.00 0.00 0.00	0.00 0.00 0.00	
Delay/Veh:	27.1 13.0 0.0 0.0 33.0	9.5 19.2 0.0 5.6 0.0 0.0 0.0	0.0 0.0 0.0	
User DelAdj:	1.00 1.00 1.00 1.00 1.00	1.00 1.00 1.00 1.00 1.00	1.00 1.00 1.00	
AdjDel/Veh:	27.1 13.0 0.0 0.0 33.0	9.5 19.2 0.0 5.6 0.0 0.0 0.0	0.0 0.0 0.0	
HCM2kAvg:	5 1 0 0 1	3 3 0 5 0 0 0	0 0 0	
*****				

## Athens Connector

## Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

\*\*\*\*\*  
Intersection #2 Industrial / Placer Corp Center  
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap. (X): 0.451

Loss Time (sec): 9 (Y+R = 4 sec) Average Delay (sec/veh): 16.7

Optimal Cycle: 32 Level Of Service: B

\*\*\*\*\*

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Protected Protected

Rights: Include Include Include Ovl

Min. Green: 0 7 7 3 7 0 0 0 0 0 3 0 3

Lanes: 0 0 1 0 1 1 0 1 0 0 0 0 0 1 0 0 0 1

## Volume Module:

Base Vol: 0 139 30 10 418 0 0 0 0 52 0 257

Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Initial Bse: 0 139 30 10 418 0 0 0 0 52 0 257

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 0.96 0.96 0.96 0.96 0.96 0.96 0.96 0.96 0.96 0.96 0.96 0.96

PHF Volume: 0 145 31 10 437 0 0 0 0 54 0 269

Reduc Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 0 145 31 10 437 0 0 0 0 54 0 269

PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Final Vol.: 0 145 31 10 437 0 0 0 0 54 0 269

## Saturation Flow Module:

Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900

Adjustment: 1.00 0.95 0.81 0.90 0.95 1.00 1.00 1.00 1.00 0.90 1.00 0.81

Lanes: 0.00 1.00 1.00 1.00 1.00 0.00 0.00 0.00 0.00 1.00 0.00 1.00

Final Sat.: 0 1809 1537 1718 1809 0 0 0 0 1718 0 1537

## Capacity Analysis Module:

Vol/Sat: 0.00 0.08 0.02 0.01 0.24 0.00 0.00 0.00 0.00 0.03 0.00 0.17

Crit Moves: \*\*\*\* \*\*\*\*

Green/Cycle: 0.00 0.54 0.54 0.03 0.57 0.00 0.00 0.00 0.00 0.34 0.00 0.37

Volume/Cap: 0.00 0.15 0.04 0.20 0.42 0.00 0.00 0.00 0.00 0.09 0.00 0.47

Delay/Veh: 0.0 11.6 10.9 49.3 12.5 0.0 0.0 0.0 0.0 22.5 0.0 24.6

User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

AdjDel/Veh: 0.0 11.6 10.9 49.3 12.5 0.0 0.0 0.0 0.0 22.5 0.0 24.6

HCM2kAvg: 0 2 0 1 8 0 0 0 0 1 0 7

\*\*\*\*\*

## Athens Connector

## Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

\*\*\*\*\*  
Intersection #3 Industrial / S. Loop  
\*\*\*\*\*

Cycle (sec):	100	Critical Vol./Cap. (X):	0.359
Loss Time (sec):	9 (Y+R = 4 sec)	Average Delay (sec/veh):	17.9
Optimal Cycle:	28	Level Of Service:	B

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Protected	Protected	Permitted	Permitted
Rights:	Include	Include	Include	Ovl
Min. Green:	0 7 7	3 7 0	0 0 0	0 3 0 3
Lanes:	0 0 1 0 1	1 0 1 0 0	0 0 0 0 0	1 0 0 0 1

## Volume Module:

Base Vol:	0 159 17 293 177	0 0 0 0 0	64 0 10
Growth Adj:	1.00 1.00 1.00 1.00 1.00	1.00 1.00 1.00 1.00 1.00	1.00 1.00 1.00
Initial Bse:	0 159 17 293 177	0 0 0 0 0	64 0 10
User Adj:	1.00 1.00 1.00 1.00 1.00	1.00 1.00 1.00 1.00 1.00	1.00 1.00 1.00
PHF Adj:	0.93 0.93 0.93 0.93 0.93	0.93 0.93 0.93 0.93 0.93	0.93 0.93 0.93
PHF Volume:	0 171 18 315 190	0 0 0 0 0	69 0 11
Reduc Vol:	0 0 0 0 0	0 0 0 0 0	0 0 0
Reduced Vol:	0 171 18 315 190	0 0 0 0 0	69 0 11
PCE Adj:	1.00 1.00 1.00 1.00 1.00	1.00 1.00 1.00 1.00 1.00	1.00 1.00 1.00
MLF Adj:	1.00 1.00 1.00 1.00 1.00	1.00 1.00 1.00 1.00 1.00	1.00 1.00 1.00
Final Vol.:	0 171 18 315 190	0 0 0 0 0	69 0 11

## Saturation Flow Module:

Sat/Lane:	1900 1900 1900 1900 1900	1900 1900 1900 1900 1900	1900 1900 1900
Adjustment:	1.00 0.95 0.81 0.90 0.95	1.00 1.00 1.00 1.00 1.00	0.73 1.00 0.81
Lanes:	0.00 1.00 1.00 1.00 1.00	0.00 0.00 0.00 0.00 0.00	1.00 0.00 1.00
Final Sat.:	0 1809 1537 1718 1809	0 0 0 0 0	1395 0 1537

## Capacity Analysis Module:

Vol/Sat:	0.00 0.09 0.01 0.18 0.11	0.00 0.00 0.00 0.00 0.00	0.05 0.00 0.01
Crit Moves:	****	****	****
Green/Cycle:	0.00 0.26 0.26 0.51 0.77	0.00 0.00 0.00 0.00 0.00	0.14 0.00 0.65
Volume/Cap:	0.00 0.36 0.05 0.36 0.14	0.00 0.00 0.00 0.00 0.00	0.36 0.00 0.01
Delay/Veh:	0.0 30.5 27.5 15.0 2.9	0.0 0.0 0.0 0.0 0.0	40.3 0.0 6.3
User DelAdj:	1.00 1.00 1.00 1.00 1.00	1.00 1.00 1.00 1.00 1.00	1.00 1.00 1.00
AdjDel/Veh:	0.0 30.5 27.5 15.0 2.9	0.0 0.0 0.0 0.0 0.0	40.3 0.0 6.3
HCM2kAvg:	0 4 0 6 1	0 0 0 0 0	3 0 0

## Athens Connector

## Level Of Service Computation Report

2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #4 Sunset / Cincinnati

Average Delay (sec/veh): 14.2 Worst Case Level Of Service: C[ 23.3]

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

Control: Stop Sign Stop Sign Uncontrolled Uncontrolled

Rights: Include Include Include Include

Lanes: 0 0 0 1 0 0 1 0 0 0 0 1 0 0 0 0 1! 0 0

## Volume Module:

Base Vol: 0 2 137 200 4 0 0 1 0 100 1 30

Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Initial Bse: 0 2 137 200 4 0 0 1 0 100 1 30

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 0.78 0.78 0.78 0.78 0.78 0.78 0.78 0.78 0.78 0.78 0.78 0.78

PHF Volume: 0 3 177 258 5 0 0 1 0 129 1 39

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Final Vol.: 0 3 177 258 5 0 0 1 0 129 1 39

## Critical Gap Module:

Critical Gp:xxxxx 6.6 6.3 7.2 6.6 xxxxx xxxxx xxxx xxxx 4.1 xxxx xxxx

FollowUpTim:xxxxx 4.0 3.3 3.5 4.0 xxxxx xxxx xxxx xxxx 2.2 xxxx xxxx

## Capacity Module:

Cnflct Vol: xxxx 299 1 369 280 xxxxx xxxx xxxx xxxx 1 xxxx xxxx

Potent Cap.: xxxx 608 1074 582 624 xxxxx xxxx xxxx xxxx 1602 xxxx xxxx

Move Cap.: xxxx 556 1074 452 570 xxxxx xxxx xxxx xxxx 1602 xxxx xxxx

Volume/Cap: xxxx 0.00 0.16 0.57 0.01 xxxx xxxx xxxx xxxx 0.08 xxxx xxxx

## Level Of Service Module:

Queue: xxxxx xxxx xxxx xxxx xxxx xxxx xxxx xxxx xxxx 0.3 xxxx xxxx

Stopped Del:xxxxx xxxx xxxx xxxx xxxx xxxx xxxx xxxx 7.4 xxxx xxxx

LOS by Move: \* \* \* \* \* \* \* \* \* A \* \*

Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT

Shared Cap.: xxxx xxxx 1060 454 xxxx xxxx xxxx xxxx xxxx xxxx xxxx xxxx

SharedQueue:xxxxx xxxx 0.6 3.6 xxxx xxxx xxxx xxxx xxxx xxxx xxxx xxxx

Shrd StpDel:xxxxx xxxx 9.1 23.3 xxxx xxxx xxxx xxxx xxxx xxxx xxxx xxxx

Shared LOS: \* \* A C \* \* \* \* \* \* \* \* \* \*

ApproachDel: 9.1 23.3 xxxxxx xxxxxx

ApproachLOS: A C \* \* \*

## Athens Connector

## Level Of Service Computation Report

2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #5 Sunset / Placer Corp Center

Average Delay (sec/veh): 1.1 Worst Case Level Of Service: A[ 8.9]

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

Control: Stop Sign Stop Sign Uncontrolled Uncontrolled

Rights: Include Include Include Include

Lanes: 0 0 0 0 0 0 0 0 1 0 0 0 0 0 0 0 2 0 1

## Volume Module:

Base Vol: 0 0 0 0 0 53 0 0 0 0 0 145 251

Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Initial Bse: 0 0 0 0 0 53 0 0 0 0 0 145 251

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 0.90 0.90 0.90 0.90 0.90 0.90 0.90 0.90 0.90 0.90 0.90 0.90 0.90

PHF Volume: 0 0 0 0 0 59 0 0 0 0 0 161 279

Reduc Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0

Final Vol.: 0 0 0 0 0 59 0 0 0 0 0 161 279

## Critical Gap Module:

Critical Gp:xxxxx xxxx xxxx xxxx xxxx 6.3 xxxx xxxx xxxx xxxx xxxx xxxx

FollowUpTim:xxxxx xxxx xxxx xxxx xxxx 3.3 xxxx xxxx xxxx xxxx xxxx xxxx

## Capacity Module:

Cnflict Vol: xxxx xxxx xxxx xxxx xxxx 81 xxxx xxxx xxxx xxxx xxxx xxxx

Potent Cap.: xxxx xxxx xxxx xxxx xxxx 971 xxxx xxxx xxxx xxxx xxxx xxxx

Move Cap.: xxxx xxxx xxxx xxxx xxxx 971 xxxx xxxx xxxx xxxx xxxx xxxx

Volume/Cap: xxxx xxxx xxxx xxxx xxxx 0.06 xxxx xxxx xxxx xxxx xxxx xxxx

## Level Of Service Module:

Queue: xxxx xxxx xxxx xxxx xxxx 0.2 xxxx xxxx xxxx xxxx xxxx xxxx

Stopped Del:xxxxx xxxx xxxx xxxx xxxx 8.9 xxxx xxxx xxxx xxxx xxxx xxxx

LOS by Move: \* \* \* \* \* A \* \* \* \* \* \*

Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT

Shared Cap.: xxxx xxxx

SharedQueue:xxxxx xxxx xxxx xxxx xxxx xxxx xxxx xxxx xxxx xxxx xxxx

Shrd StpDel:xxxxx xxxx xxxx xxxx xxxx xxxx xxxx xxxx xxxx xxxx xxxx

Shared LOS: \* \* \* \* \* \* \* \* \* \* \* \*

ApproachDel: xxxxx 8.9 xxxxxx xxxxxx

ApproachLOS: \* A \* \*

## Athens Connector

## Level Of Service Computation Report

2000 HCM Unsigned Method (Base Volume Alternative)

Intersection #6 Sunset / S. Loop

Average Delay (sec/veh): 6.0 Worst Case Level Of Service: B[ 15.0]

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

Control: Stop Sign Stop Sign Uncontrolled Uncontrolled

Rights: Include Include Include Include

Lanes: 0 0 0 0 1 0 0 0 0 0 0 0 2 0 1 0 0 0 0 0

## Volume Module:

Base Vol: 0 0 310 0 0 0 0 391 74 0 0 0

Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Initial Bse: 0 0 310 0 0 0 0 391 74 0 0 0

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 0.75 0.75 0.75 0.75 0.75 0.75 0.75 0.75 0.75 0.75 0.75 0.75

PHF Volume: 0 0 414 0 0 0 0 522 99 0 0 0

Reduc Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Final Vol.: 0 0 414 0 0 0 0 522 99 0 0 0

## Critical Gap Module:

Critical Gp:xxxxx xxxx 6.3 xxxxx xxxx xxxxx xxxx xxxx xxxx xxxx xxxx xxxx xxxx

FollowUpTim:xxxxx xxxx 3.3 xxxxx xxxx xxxxx xxxx xxxx xxxx xxxx xxxx xxxx

## Capacity Module:

Cnflct Vol: xxxx xxxx 261 xxxx xxxx xxxx xxxx xxxx xxxx xxxx xxxx xxxx

Potent Cap.: xxxx xxxx 770 xxxx xxxx xxxx xxxx xxxx xxxx xxxx xxxx

Move Cap.: xxxx xxxx 770 xxxx xxxx xxxx xxxx xxxx xxxx xxxx xxxx

Volume/Cap: xxxx xxxx 0.54 xxxx xxxx xxxx xxxx xxxx xxxx xxxx xxxx

## Level Of Service Module:

Queue: xxxxx xxxx 3.2 xxxxx xxxx xxxx xxxx xxxx xxxx xxxx xxxx xxxx

Stopped Del:xxxxx xxxx 15.0 xxxxx xxxx xxxx xxxx xxxx xxxx xxxx

LOS by Move: \* \* B \* \* \* \* \* \* \* \* \*

Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT

Shared Cap.: xxxx xxxx xxxx xxxx xxxx xxxx xxxx xxxx xxxx xxxx

SharedQueue:xxxxx xxxx xxxx xxxx xxxx xxxx xxxx xxxx xxxx xxxx

Shrd StpDel:xxxxx xxxx xxxx xxxx xxxx xxxx xxxx xxxx xxxx xxxx

Shared LOS: \* \* \* \* \* \* \* \* \* \* \*

ApproachDel: 15.0 xxxxxx xxxxxx xxxxxx

ApproachLOS: B \* \* \*

Existing PM

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## Athens Connector

## Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

Intersection #7 Sunset / SR-65

Cycle (sec): 100 Critical Vol./Cap. (X): 0.955

Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 41.4

Optimal Cycle: 143 Level Of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound					
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Protected		Protected		Protected		Protected		Protected		Protected		Protected		Protected
Rights:	Ovl		Ovl		Ovl		Ignore		Ovl		Ovl		Ovl		Ovl
Min. Green:	3	7	7	3	7	7	3	7	7	3	7	7	3	7	7
Lanes:	2	0	2	0	1	2	0	2	0	1	1	0	1	0	1
Volume Module:															
Base Vol:	267	1638	111	262	1452	22	43	109	549	557	83	271			
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Initial Bse:	267	1638	111	262	1452	22	43	109	549	557	83	271			
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00			
PHF Adj:	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.00	0.93	0.93	0.93			
PHF Volume:	287	1759	119	281	1560	24	46	117	0	598	89	291			
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0			
Reduced Vol:	287	1759	119	281	1560	24	46	117	0	598	89	291			
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00			
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00			
Final Vol.:	287	1759	119	281	1560	24	46	117	0	598	89	291			
Saturation Flow Module:															
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900			
Adjustment:	0.88	0.90	0.81	0.88	0.90	0.81	0.90	0.95	1.00	0.88	0.90	0.81			
Lanes:	2.00	2.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00	2.00	2.00	1.00			
Final Sat.:	3334	3437	1537	3334	3437	1537	1718	1809	1900	3334	3437	1537			
Capacity Analysis Module:															
Vol/Sat:	0.09	0.51	0.08	0.08	0.45	0.02	0.03	0.06	0.00	0.18	0.03	0.19			
Crit Moves:	****		****		****		****		****		****				
Green/Cycle:	0.10	0.53	0.72	0.09	0.52	0.55	0.03	0.07	0.00	0.19	0.23	0.32			
Volume/Cap:	0.87	0.96	0.11	0.96	0.87	0.03	0.90	0.92	0.00	0.96	0.11	0.60			
Delay/Veh:	65.1	34.7	4.2	86.4	25.6	10.1	135.8	103	0.0	66.1	30.7	31.0			
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
AdjDel/Veh:	65.1	34.7	4.2	86.4	25.6	10.1	135.8	103	0.0	66.1	30.7	31.0			
HCM2kAvg:	7	32	1	8	24	0	3	7	0	14	1	8			

**EXISTING PLUS PROJECT  
LEVEL OF SERVICE CALCULATIONS**

## Athens Connector

## Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

\*\*\*\*\*  
Intersection #1 Industrial / Athens  
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap. (X): 0.152

Loss Time (sec): 9 (Y+R = 4 sec) Average Delay (sec/veh): 14.1

Optimal Cycle: 26 Level Of Service: B

\*\*\*\*\*

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

\*\*\*\*\*

Control: Protected Protected Protected Protected

Rights: Include Ovl Ovl Include

Min. Green: 3 7 0 0 0 7 7 7 0 7 0 0 0 0 0

Lanes: 2 0 1 0 0 0 1 0 1 0 0 0 1 0 0 0 0

\*\*\*\*\*

## Volume Module:

Base Vol: 226 16 0 0 24 92 74 0 138 0 0 0

Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Initial Bse: 226 16 0 0 24 92 74 0 138 0 0 0

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 0.90 0.90 0.90 0.90 0.90 0.90 0.90 0.90 0.90 0.90 0.90 0.90

PHF Volume: 251 18 0 0 27 102 82 0 153 0 0 0

Reduc Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 251 18 0 0 27 102 82 0 153 0 0 0

PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Final Vol.: 251 18 0 0 27 102 82 0 153 0 0 0

\*\*\*\*\*

## Saturation Flow Module:

Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900

Adjustment: 0.88 0.95 1.00 1.00 0.95 0.81 0.90 1.00 0.81 1.00 1.00 1.00

Lanes: 2.00 1.00 0.00 0.00 1.00 1.00 1.00 0.00 1.00 0.00 0.00 0.00

Final Sat.: 3334 1809 0 0 1809 1537 1718 0 1537 0 0 0

\*\*\*\*\*

## Capacity Analysis Module:

Vol/Sat: 0.08 0.01 0.00 0.00 0.01 0.07 0.05 0.00 0.10 0.00 0.00 0.00

Crit Moves: \*\*\*\* \* \*\*\*\* \*

Green/Cycle: 0.50 0.59 0.00 0.00 0.10 0.41 0.32 0.00 0.81 0.00 0.00 0.00

Volume/Cap: 0.15 0.02 0.00 0.00 0.15 0.16 0.15 0.00 0.12 0.00 0.00 0.00

Delay/Veh: 13.7 8.3 0.0 0.0 41.8 18.6 24.7 0.0 2.0 0.0 0.0 0.0

User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

AdjDel/Veh: 13.7 8.3 0.0 0.0 41.8 18.6 24.7 0.0 2.0 0.0 0.0 0.0

HCM2kAvg: 2 0 0 0 1 2 2 0 1 0 0 0

\*\*\*\*\*

## Athens Connector

## Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

Intersection #2 Industrial / Placer Corp Center

Cycle (sec): 100 Critical Vol./Cap. (X): 0.221  
 Loss Time (sec): 9 (Y+R = 4 sec) Average Delay (sec/veh): 17.6  
 Optimal Cycle: 23 Level Of Service: B

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Protected	Protected	Protected	Protected
Rights:	Include	Include	Include	Ovl
Min. Green:	0 7 7	3 7 0	0 0 0	0 3 0 3
Lanes:	0 0 1 0 1	1 0 1 0 0	0 0 0 0 0	1 0 0 0 1

## Volume Module:

Base Vol:	0 116 112 17 149	0 0 0 0 28	0 163
Growth Adj:	1.00 1.00 1.00 1.00 1.00	1.00 1.00 1.00 1.00 1.00	1.00 1.00 1.00 1.00 1.00
Initial Bse:	0 116 112 17 149	0 0 0 0 28	0 163
User Adj:	1.00 1.00 1.00 1.00 1.00	1.00 1.00 1.00 1.00 1.00	1.00 1.00 1.00 1.00 1.00
PHF Adj:	0.89 0.89 0.89 0.89 0.89	0.89 0.89 0.89 0.89 0.89	0.89 0.89 0.89 0.89 0.89
PHF Volume:	0 130 126 19 167	0 0 0 0 31	0 183
Reduc Vol:	0 0 0 0 0	0 0 0 0 0	0 0 0
Reduced Vol:	0 130 126 19 167	0 0 0 0 31	0 183
PCE Adj:	1.00 1.00 1.00 1.00 1.00	1.00 1.00 1.00 1.00 1.00	1.00 1.00 1.00 1.00 1.00
MLF Adj:	1.00 1.00 1.00 1.00 1.00	1.00 1.00 1.00 1.00 1.00	1.00 1.00 1.00 1.00 1.00
Final Vol.:	0 130 126 19 167	0 0 0 0 31	0 183

## Saturation Flow Module:

Sat/Lane:	1900 1900 1900 1900 1900	1900 1900 1900 1900 1900	1900 1900 1900 1900 1900
Adjustment:	1.00 0.95 0.81 0.90 0.95	1.00 1.00 1.00 1.00 1.00	0.90 1.00 0.81
Lanes:	0.00 1.00 1.00 1.00 1.00	0.00 0.00 0.00 0.00 0.00	1.00 0.00 1.00
Final Sat.:	0 1809 1537 1718 1809	0 0 0 0 1718	0 1537

## Capacity Analysis Module:

Vol/Sat:	0.00 0.07 0.08 0.01 0.09	0.00 0.00 0.00 0.00 0.00	0.00 0.02 0.00 0.12
Crit Moves:	****	****	****
Green/Cycle:	0.00 0.41 0.41 0.06 0.46	0.00 0.00 0.00 0.00 0.00	0.00 0.45 0.00 0.50
Volume/Cap:	0.00 0.18 0.20 0.20 0.20	0.00 0.00 0.00 0.00 0.00	0.00 0.04 0.00 0.24
Delay/Veh:	0.0 18.9 19.2 46.1 15.9	0.0 0.0 0.0 0.0 0.0	0.0 15.7 0.0 14.3
User DelAdj:	1.00 1.00 1.00 1.00 1.00	1.00 1.00 1.00 1.00 1.00	1.00 1.00 1.00 1.00 1.00
AdjDel/Veh:	0.0 18.9 19.2 46.1 15.9	0.0 0.0 0.0 0.0 0.0	0.0 15.7 0.0 14.3
HCM2kAvg:	0 3 2 1 3	0 0 0 0 0	0 1 0 3

## Athens Connector

## Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

\*\*\*\*\*  
Intersection #3 Industrial / S. Loop  
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap. (X): 0.268

Loss Time (sec): 9 (Y+R = 4 sec) Average Delay (sec/veh): 16.6

Optimal Cycle: 25 Level Of Service: B

\*\*\*\*\*

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Permitted Permitted

Rights: Include Include Include Ovl

Min. Green: 0 7 7 3 7 0 0 0 0 0 3 0 3

Lanes: 0 0 1 0 1 1 0 1 0 0 0 0 1 0 0 0 1

## Volume Module:

Base Vol: 0 223 12 88 95 0 0 0 0 43 0 5

Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Initial Bse: 0 223 12 88 95 0 0 0 0 43 0 5

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 0.84 0.84 0.84 0.84 0.84 0.84 0.84 0.84 0.84 0.84 0.84 0.84

PHF Volume: 0 265 14 105 113 0 0 0 0 51 0 6

Reduc Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 0 265 14 105 113 0 0 0 0 51 0 6

PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Final Vol.: 0 265 14 105 113 0 0 0 0 51 0 6

## Saturation Flow Module:

Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900

Adjustment: 1.00 0.95 0.81 0.90 0.95 1.00 1.00 1.00 1.00 0.75 1.00 0.81

Lanes: 0.00 1.00 1.00 1.00 1.00 0.00 0.00 0.00 0.00 1.00 0.00 1.00

Final Sat.: 0 1809 1537 1718 1809 0 0 0 0 1422 0 1537

## Capacity Analysis Module:

Vol/Sat: 0.00 0.15 0.01 0.06 0.06 0.00 0.00 0.00 0.00 0.04 0.00 0.00

Crit Moves: \*\*\*\* \*\*\* \*\*\*

Green/Cycle: 0.00 0.55 0.55 0.23 0.78 0.00 0.00 0.00 0.00 0.13 0.00 0.36

Volume/Cap: 0.00 0.27 0.02 0.27 0.08 0.00 0.00 0.00 0.00 0.27 0.00 0.01

Delay/Veh: 0.0 12.1 10.3 32.1 2.7 0.0 0.0 0.0 0.0 39.6 0.0 20.4

User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

AdjDel/Veh: 0.0 12.1 10.3 32.1 2.7 0.0 0.0 0.0 0.0 39.6 0.0 20.4

HCM2kAvg: 0 4 0 3 1 0 0 0 0 2 0 0

\*\*\*\*\*

## Athens Connector

## Level Of Service Computation Report

2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #4 Sunset / Cincinnati

Average Delay (sec/veh): 14.1 Worst Case Level Of Service: F[ 57.2]

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

Control: Stop Sign Stop Sign Uncontrolled Uncontrolled

Rights: Include Include Include Include

Lanes: 0 0 1! 0 0 0 0 1! 0 0 0 0 1! 0 0 0 0 1! 0 0

## Volume Module:

Base Vol: 10 4 53 135 11 5 2 128 2 108 116 160

Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Initial Bse: 10 4 53 135 11 5 2 128 2 108 116 160

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 0.73 0.73 0.73 0.73 0.73 0.73 0.73 0.73 0.73 0.73 0.73 0.73

PHF Volume: 14 5 73 185 15 7 3 175 3 148 159 219

Reduc Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Final Vol.: 14 5 73 185 15 7 3 175 3 148 159 219

## Critical Gap Module:

Critical Gp: 7.2 6.6 6.3 7.2 6.6 6.3 4.1 xxxx xxxx 4.1 xxxx xxxx

FollowUpTim: 3.5 4.0 3.3 3.5 4.0 3.3 2.2 xxxx xxxx 2.2 xxxx xxxx

## Capacity Module:

Cnflct Vol: 758 856 177 786 748 268 378 xxxx xxxx 178 xxxx xxxx

Potent Cap.: 320 292 859 306 337 763 1164 xxxx xxxx 1380 xxxx xxxx

Move Cap.: 277 257 859 251 297 763 1164 xxxx xxxx 1380 xxxx xxxx

Volume/Cap: 0.05 0.02 0.08 0.74 0.05 0.01 0.00 xxxx xxxx 0.11 xxxx xxxx

## Level Of Service Module:

Queue: xxxx xxxx xxxx xxxx xxxx 0.0 xxxx xxxx 0.4 xxxx xxxx

Stopped Del:xxxxx xxxx xxxx xxxx xxxx 8.1 xxxx xxxx 7.9 xxxx xxxx

LOS by Move: \* \* \* \* \* A \* \* \* A \* \*

Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT

Shared Cap.: xxxx 591 xxxx xxxx 260 xxxx xxxx xxxx xxxx xxxx xxxx xxxx

SharedQueue:xxxxx 0.5 xxxx xxxx 6.1 xxxx xxxx xxxx xxxx xxxx xxxx xxxx

Shrd StpDel:xxxxx 12.2 xxxx xxxx 57.2 xxxx xxxx xxxx xxxx xxxx xxxx

Shared LOS: \* B \* \* F \* \* \* \* \* \*

ApproachDel: 12.2 57.2 xxxxxx xxxxxx

ApproachLOS: B F \* \*

## Athens Connector

## Level Of Service Computation Report

2000 HCM Unsignalized Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #5 Sunset / Placer Corp Center
\*\*\*\*\*

Average Delay (sec/veh): 1.7 Worst Case Level Of Service: B[ 10.0]
\*\*\*\*\*

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Stop Sign	Stop Sign	Uncontrolled	Uncontrolled
Rights:	Include	Include	Include	Include
Lanes:	0 0 0 0 0	0 0 0 0 1	0 0 0 0 0	0 0 2 0 1

Volume Module:

Base Vol:	0 0 0 0 119	0 0 0 0 0	0 355 210
Growth Adj:	1.00 1.00 1.00 1.00 1.00	1.00 1.00 1.00 1.00 1.00	1.00 1.00 1.00 1.00 1.00
Initial Bse:	0 0 0 0 119	0 0 0 0 0	0 355 210
User Adj:	1.00 1.00 1.00 1.00 1.00	1.00 1.00 1.00 1.00 1.00	1.00 1.00 1.00 1.00 1.00
PHF Adj:	0.93 0.93 0.93 0.93 0.93	0.93 0.93 0.93 0.93 0.93	0.93 0.93 0.93 0.93 0.93
PHF Volume:	0 0 0 0 128	0 0 0 0 0	0 382 226
Reduct Vol:	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0
Final Vol.:	0 0 0 0 128	0 0 0 0 0	0 382 226

Critical Gap Module:

Critical Gp:	xxxxx xxxx xxxx xxxx xxxx	6.3 xxxx xxxx xxxx xxxx xxxx
FollowUpTim:	xxxxx xxxx xxxx xxxx xxxx	3.3 xxxx xxxx xxxx xxxx xxxx

Capacity Module:

Cnflict Vol:	xxxxx xxxx xxxx xxxx xxxx	191 xxxx xxxx xxxx xxxx
Potent Cap.:	xxxxx xxxx xxxx xxxx xxxx	843 xxxx xxxx xxxx xxxx
Move Cap.:	xxxxx xxxx xxxx xxxx xxxx	843 xxxx xxxx xxxx xxxx
Volume/Cap:	xxxxx xxxx xxxx xxxx xxxx	0.15 xxxx xxxx xxxx xxxx

Level Of Service Module:

Queue:	xxxxx xxxx xxxx xxxx xxxx	0.5 xxxx xxxx xxxx xxxx xxxx		
Stopped Del:	xxxxx xxxx xxxx xxxx xxxx	10.0 xxxx xxxx xxxx xxxx xxxx		
LOS by Move:	* * * * B	* * * * *		
Movement:	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT
Shared Cap.:	xxxxx xxxx xxxx xxxx xxxx	xxxx xxxx xxxx xxxx xxxx	xxxx xxxx xxxx xxxx xxxx	xxxx xxxx xxxx xxxx xxxx
SharedQueue:	xxxxx xxxx xxxx xxxx xxxx	xxxxx xxxx xxxx xxxx xxxx	xxxxx xxxx xxxx xxxx xxxx	xxxxx xxxx xxxx xxxx xxxx
Shrd StpDel:	xxxxx xxxx xxxx xxxx xxxx	xxxxx xxxx xxxx xxxx xxxx	xxxxx xxxx xxxx xxxx xxxx	xxxxx xxxx xxxx xxxx xxxx
Shared LOS:	* * * * *	* * * * *	* * * * *	* * * *
ApproachDel:	xxxxxx	10.0	xxxxxx	xxxxxx
ApproachLOS:	*	B	*	*

## Athens Connector

## Level Of Service Computation Report

2000 HCM Unsignalized Method (Base Volume Alternative)

\*\*\*\*\*  
Intersection #6 Sunset / S. Loop  
\*\*\*\*\*Average Delay (sec/veh): 2.3 Worst Case Level Of Service: A[ 9.6]  
\*\*\*\*\*Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R  
-----|-----|-----|-----|-----|-----|-----|-----|Control: Stop Sign Stop Sign Uncontrolled Uncontrolled  
Rights: Include Include Include Include  
Lanes: 0 0 0 0 1 0 0 0 0 0 0 0 2 0 1 0 0 0 0 0  
-----|-----|-----|-----|-----|-----|-----|-----|

## Volume Module:

	0	0	100	0	0	0	0	277	48	0	0	0
Base Vol:	0	0	100	0	0	0	0	277	48	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	100	0	0	0	0	277	48	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
PHF Volume:	0	0	108	0	0	0	0	298	52	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	0	0	108	0	0	0	0	298	52	0	0	0

## Critical Gap Module:

Critical Gp:	xxxxx	xxxx	6.3	xxxxx	xxxx	xxxxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	3.3	xxxxx	xxxx	xxxxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxx	xxxxx

## Capacity Module:

Cnflict Vol:	xxxx	xxxx	149	xxxx	xxxx	xxxxxx	xxxx	xxxx	xxxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	890	xxxx	xxxx	xxxxxx	xxxx	xxxx	xxxxxx	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	890	xxxx	xxxx	xxxxxx	xxxx	xxxx	xxxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	xxxx	xxxx	0.12	xxxx	xxxx	xxxx	xxxx	xxxx	xxxxxx	xxxx	xxxx	xxxxx

## Level Of Service Module:

Queue:	xxxxx	xxxx	0.4	xxxxx	xxxx	xxxxxx	xxxx	xxxxxx	xxxxx	xxxx	xxxx	xxxxx			
Stopped Del:	xxxxx	xxxx	9.6	xxxxx	xxxx	xxxxxx	xxxx	xxxxxx	xxxxx	xxxx	xxxx	xxxxx			
LOS by Move:	*	*	A	*	*	*	*	*	*	*	*	*			
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxxx	xxxx	xxxx	xxxxxx	xxxx	xxxx	xxxxxx	xxxx	xxxx	xxxxx			
SharedQueue:	xxxxx	xxxx	xxxxxx	xxxxx	xxxx	xxxxxx	xxxx	xxxx	xxxxxx	xxxx	xxxx	xxxxx			
Shrd StpDel:	xxxxx	xxxx	xxxxxx	xxxxx	xxxx	xxxxxx	xxxx	xxxxxx	xxxxx	xxxx	xxxx	xxxxx			
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*			
ApproachDel:	9.6			xxxxxx			xxxxxx		xxxxxx		xxxxxx				
ApproachLOS:	A			*			*		*		*				

## Athens Connector

## Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #7 Sunset / SR-65
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap. (X): 0.782  
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 24.5  
Optimal Cycle: 73 Level Of Service: C
\*\*\*\*\*

Approach:	North Bound			South Bound			East Bound			West Bound					
	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Protected			Protected			Protected			Protected					
Rights:	Ovl			Ovl			Ignore			Ovl					
Min. Green:	3	7	7	3	7	7	3	7	7	3	7	7			
Lanes:	2	0	2	0	1	2	0	2	0	1	1	0	1	0	1

Volume Module:

Base Vol:	426	997	578	285	1407	16	51	85	231	118	122	149
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	426	997	578	285	1407	16	51	85	231	118	122	149
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Adj:	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.00	0.90	0.90	0.90
PHF Volume:	473	1108	642	317	1563	18	57	94	0	131	136	166
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	473	1108	642	317	1563	18	57	94	0	131	136	166
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Final Vol.:	473	1108	642	317	1563	18	57	94	0	131	136	166

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.88	0.90	0.81	0.88	0.90	0.81	0.90	0.95	1.00	0.88	0.90	0.81
Lanes:	2.00	2.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00	2.00	2.00	1.00
Final Sat.:	3334	3437	1537	3334	3437	1537	1718	1809	1900	3334	3437	1537

Capacity Analysis Module:

Vol/Sat:	0.14	0.32	0.42	0.09	0.45	0.01	0.03	0.05	0.00	0.04	0.04	0.11
Crit Moves:	****		****		****		****		****		****	
Green/Cycle:	0.18	0.61	0.66	0.15	0.58	0.63	0.05	0.07	0.00	0.05	0.07	0.22
Volume/Cap:	0.79	0.53	0.64	0.62	0.79	0.02	0.66	0.75	0.00	0.79	0.56	0.48
Delay/Veh:	45.9	11.6	11.4	42.1	18.4	7.0	63.8	66.9	0.0	68.3	48.1	35.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	45.9	11.6	11.4	42.1	18.4	7.0	63.8	66.9	0.0	68.3	48.1	35.0
HCM2kAvg:	9	10	12	6	20	0	3	5	0	4	3	5

## Athens Connector

## Level Of Service Computation Report

2000 HCM Unsignalized Method (Base Volume Alternative)

\*\*\*\*\*

Intersection #9 Athens / Athens Connector

\*\*\*\*\*

Average Delay (sec/veh): 2.7 Worst Case Level Of Service: B[ 12.6]

\*\*\*\*\*

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

-----|-----|-----|-----|-----|

Control: Stop Sign Stop Sign Uncontrolled Uncontrolled

Rights: Include Include Include Include

Lanes: 1 0 0 0 1 0 0 0 0 0 0 1 0 1 1 0 1 0 0

-----|-----|-----|-----|-----|

Volume Module:

Base Vol: 120 0 10 0 0 0 0 185 143 10 164 0

Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Initial Bse: 120 0 10 0 0 0 0 185 143 10 164 0

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 0.90 0.90 0.90 0.90 0.90 0.90 0.90 0.90 0.90 0.90 0.90 0.90

PHF Volume: 133 0 11 0 0 0 0 206 159 11 182 0

Reduc Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Final Vol.: 133 0 11 0 0 0 0 206 159 11 182 0

-----|-----|-----|-----|-----|

Critical Gap Module:

Critical Gp: 6.4 xxxx 6.3 xxxxx xxxx xxxx xxxx xxxx xxxx 4.1 xxxx xxxx

FollowUpTim: 3.5 xxxx 3.3 xxxxx xxxx xxxx xxxx xxxx 2.2 xxxx xxxx

-----|-----|-----|-----|-----|

Capacity Module:

Cnflict Vol: 410 xxxx 206 xxxx xxxx xxxx xxxx xxxx 364 xxxx xxxx

Potent Cap.: 592 xxxx 827 xxxx xxxx xxxx xxxx xxxx 1178 xxxx xxxx

Move Cap.: 588 xxxx 827 xxxx xxxx xxxx xxxx xxxx 1178 xxxx xxxx

Volume/Cap: 0.23 xxxx 0.01 xxxx xxxx xxxx xxxx xxxx 0.01 xxxx xxxx

-----|-----|-----|-----|-----|

Level Of Service Module:

Queue: 0.9 xxxx 0.0 xxxxx xxxx xxxx xxxx xxxx 0.0 xxxx xxxx

Stopped Del: 12.9 xxxx 9.4 xxxxx xxxx xxxx xxxx xxxx 8.1 xxxx xxxx

LOS by Move: B \* A \* \* \* \* \* \* A \* \*

Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT

Shared Cap.: xxxx xxxx xxxx xxxx xxxx xxxx xxxx xxxx xxxx xxxx

SharedQueue:xxxxx xxxx xxxx xxxx xxxx xxxx xxxx xxxx xxxx xxxx

Shrd StpDel:xxxxx xxxx xxxx xxxx xxxx xxxx xxxx xxxx xxxx xxxx

Shared LOS: \* \* \* \* \* \* \* \* \* \* \* \*

ApproachDel: 12.6 xxxxxx xxxxxx xxxxxx xxxxxx

ApproachLOS: B \* \* \*

## Athens Connector

## Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

Intersection #1 Industrial / Athens

Cycle (sec): 100 Critical Vol./Cap. (X): 0.320  
 Loss Time (sec): 9 (Y+R = 4 sec) Average Delay (sec/veh): 15.2  
 Optimal Cycle: 26 Level Of Service: B

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

Control:	Protected	Protected	Protected	Protected
Rights:	Include	Ovl	Ovl	Include
Min. Green:	3 7 0	0 0 7	7 7 0	7 0 0
Lanes:	2 0 1 0 0	0 0 1 0 1	1 1 0 0 0	1 0 0 0 0

Volume Module:

Base Vol:	271	61	0	0	15	199	122	0	295	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	271	61	0	0	15	199	122	0	295	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
PHF Volume:	315	71	0	0	17	231	142	0	343	0	0	0
Reduc Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	315	71	0	0	17	231	142	0	343	0	0	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	315	71	0	0	17	231	142	0	343	0	0	0

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.88	0.95	1.00	1.00	0.95	0.81	0.90	1.00	0.81	1.00	1.00	1.00
Lanes:	2.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00	0.00	0.00	0.00
Final Sat.:	3334	1809	0	0	1809	1537	1718	0	1537	0	0	0

Capacity Analysis Module:

Vol/Sat:	0.09	0.04	0.00	0.00	0.01	0.15	0.08	0.00	0.22	0.00	0.00	0.00
Crit Moves:	****					****			****			
Green/Cycle:	0.30	0.51	0.00	0.00	0.21	0.61	0.40	0.00	0.70	0.00	0.00	0.00
Volume/Cap:	0.32	0.08	0.00	0.00	0.05	0.24	0.21	0.00	0.32	0.00	0.00	0.00
Delay/Veh:	27.6	12.6	0.0	0.0	31.4	8.9	19.6	0.0	6.1	0.0	0.0	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	27.6	12.6	0.0	0.0	31.4	8.9	19.6	0.0	6.1	0.0	0.0	0.0
HCM2kAvg:	4	1	0	0	3	3	3	0	4	0	0	0

## Athens Connector

## Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

Intersection #2 Industrial / Placer Corp Center

Cycle (sec): 100 Critical Vol./Cap. (X): 0.389  
 Loss Time (sec): 9 (Y+R = 4 sec) Average Delay (sec/veh): 15.7  
 Optimal Cycle: 29 Level Of Service: B

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Protected	Protected	Protected	Protected
Rights:	Include	Include	Include	Ovl
Min. Green:	0 7 7	3 7 0	0 0 0	3 0 3
Lanes:	0 0 1 0 1	1 0 1 0 0	0 0 0 0 0	1 0 0 0 1

## Volume Module:

Base Vol:	0 127 59	10 374 0	0 0 0	0 52 0	213
Growth Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
Initial Bse:	0 127 59	10 374 0	0 0 0	0 52 0	213
User Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
PHF Adj:	0.96 0.96 0.96	0.96 0.96 0.96	0.96 0.96 0.96	0.96 0.96 0.96	0.96 0.96 0.96
PHF Volume:	0 132 61	10 390 0	0 0 0	0 54 0	222
Reduc Vol:	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0
Reduced Vol:	0 132 61	10 390 0	0 0 0	0 54 0	222
PCE Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
MLF Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
Final Vol.:	0 132 61	10 390 0	0 0 0	0 54 0	222

## Saturation Flow Module:

Sat/Lane:	1900 1900 1900	1900 1900 1900	1900 1900 1900	1900 1900 1900	1900 1900 1900
Adjustment:	1.00 0.95 0.81	0.90 0.95 1.00	1.00 1.00 1.00	1.00 1.00 1.00	0.90 1.00 0.81
Lanes:	0.00 1.00 1.00	1.00 1.00 1.00	0.00 0.00 0.00	0.00 1.00 0.00	1.00 0.00 1.00
Final Sat.:	0 1809 1537	1718 1809 0	0 0 0	0 1718 0	1537

## Capacity Analysis Module:

Vol/Sat:	0.00 0.07 0.04	0.01 0.22 0.00	0.00 0.00 0.00	0.00 0.03 0.00	0.14
Crit Moves:	****	****			****
Green/Cycle:	0.00 0.56	0.56 0.03 0.59	0.00 0.00 0.00	0.00 0.32 0.00	0.35
Volume/Cap:	0.00 0.13	0.07 0.20 0.36	0.00 0.00 0.00	0.00 0.10 0.00	0.42
Delay/Veh:	0.0 10.3	9.9 49.3 10.7	0.0 0.0 0.0	0.0 24.3 0.0	25.6
User DelAdj:	1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00
AdjDel/Veh:	0.0 10.3	9.9 49.3 10.7	0.0 0.0 0.0	0.0 24.3 0.0	25.6
HCM2kAvg:	0 2	1 1 6	0 0 0	0 1 0	5

## Athens Connector

## Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

Intersection #3 Industrial / S. Loop

Cycle (sec):	100	Critical Vol./Cap. (X):	0.370		
Loss Time (sec):	9 (Y+R = 4 sec)	Average Delay (sec/veh):	20.2		
Optimal Cycle:	28	Level Of Service:	C		
Approach:	North Bound	South Bound	East Bound	West Bound	
Movement:	L - T - R	L - T - R	L - T - R	L - T - R	
Control:	Protected	Protected	Permitted	Permitted	
Rights:	Include	Include	Include	Ovl	
Min. Green:	0 7 7	3 7 0	0 0 0	3 0 3	
Lanes:	0 0 1 0 1	1 0 1 0 0	0 0 0 0 0	1 0 0 0 1	
Volume Module:					
Base Vol:	0 178 17 266 150	0 0 0 0	83 0 10		
Growth Adj:	1.00 1.00 1.00 1.00 1.00	1.00 1.00 1.00 1.00	1.00 1.00 1.00 1.00	1.00 1.00 1.00 1.00	
Initial Bse:	0 178 17 266 150	0 0 0	83 0 10		
User Adj:	1.00 1.00 1.00 1.00 1.00	1.00 1.00 1.00 1.00	1.00 1.00 1.00 1.00	1.00 1.00 1.00 1.00	
PHF Adj:	0.93 0.93 0.93 0.93 0.93	0.93 0.93 0.93 0.93	0.93 0.93 0.93 0.93	0.93 0.93 0.93 0.93	
PHF Volume:	0 191 18 286 161	0 0 0	89 0 11		
Reduc Vol:	0 0 0 0 0	0 0 0	0 0 0	0 0 0	
Reduced Vol:	0 191 18 286 161	0 0 0	89 0 11		
PCE Adj:	1.00 1.00 1.00 1.00 1.00	1.00 1.00 1.00 1.00	1.00 1.00 1.00 1.00	1.00 1.00 1.00 1.00	
MLF Adj:	1.00 1.00 1.00 1.00 1.00	1.00 1.00 1.00 1.00	1.00 1.00 1.00 1.00	1.00 1.00 1.00 1.00	
Final Vol.:	0 191 18 286 161	0 0 0	89 0 11		
Saturation Flow Module:					
Sat/Lane:	1900 1900 1900 1900 1900	1900 1900 1900 1900	1900 1900 1900 1900	1900 1900 1900 1900	
Adjustment:	1.00 0.95 0.81 0.90 0.95	1.00 1.00 1.00 1.00	1.00 0.73 1.00 0.81		
Lanes:	0.00 1.00 1.00 1.00 0.00	0.00 0.00 0.00 0.00	0.00 1.00 0.00 1.00		
Final Sat.:	0 1809 1537 1718 1809	0 0 0 0	1391 0 1537		
Capacity Analysis Module:					
Vol/Sat:	0.00 0.11 0.01 0.17 0.09	0.00 0.00 0.00 0.00	0.00 0.06 0.00 0.01		
Crit Moves:	****	***	*****		
Green/Cycle:	0.00 0.29 0.29 0.45 0.74	0.00 0.00 0.00 0.00	0.00 0.17 0.00 0.62		
Volume/Cap:	0.00 0.37 0.04 0.37 0.12	0.00 0.00 0.00 0.00	0.00 0.37 0.00 0.01		
Delay/Veh:	0.0 28.9 25.8 18.4 3.9	0.0 0.0 0.0 0.0	0.0 37.5 0.0 7.1		
User DelAdj:	1.00 1.00 1.00 1.00 1.00	1.00 1.00 1.00 1.00	1.00 1.00 1.00 1.00	1.00 1.00 1.00 1.00	
AdjDel/Veh:	0.0 28.9 25.8 18.4 3.9	0.0 0.0 0.0 0.0	0.0 37.5 0.0 7.1		
HCM2kAvg:	0 5 0 6 1	0 0 0 0	3 0 0		

## Athens Connector

## Level Of Service Computation Report

2000 HCM Unsignalized Method (Base Volume Alternative)

\*\*\*\*\*  
Intersection #4 Sunset / Cincinnati  
\*\*\*\*\*Average Delay (sec/veh): 34.0 Worst Case Level Of Service: F[107.7]  
\*\*\*\*\*

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Stop Sign	Stop Sign	Uncontrolled	Uncontrolled
Rights:	Include	Include	Include	Include
Lanes:	0 0 1! 0 0	0 0 1! 0 0	0 0 1! 0 0	0 0 1! 0 0

## Volume Module:

Base Vol:	10	2	137	200	4	10	4	146	4	100	105	30
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	10	2	137	200	4	10	4	146	4	100	105	30
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
PHF Volume:	13	3	176	256	5	13	5	187	5	128	135	38
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	13	3	176	256	5	13	5	187	5	128	135	38

## Critical Gap Module:

Critical Gp:	7.2	6.6	6.3	7.2	6.6	6.3	4.1	xxxxx	xxxxxx	4.1	xxxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	3.5	4.0	3.3	2.2	xxxxx	xxxxxx	2.2	xxxxx	xxxxx

## Capacity Module:

Cnflict Vol:	619	629	190	699	613	154	173	xxxxx	xxxxxx	192	xxxxx	xxxxx
Potent Cap.:	397	395	844	350	404	884	1386	xxxxx	xxxxxx	1363	xxxxx	xxxxx
Move Cap.:	356	354	844	254	362	884	1386	xxxxx	xxxxxx	1363	xxxxx	xxxxx
Volume/Cap:	0.04	0.01	0.21	1.01	0.01	0.01	0.00	xxxxx	xxxxx	0.09	xxxxx	xxxxx

## Level Of Service Module:

Queue:	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	0.0	xxxxx	xxxxxx	0.3	xxxxx	xxxxx			
Stopped Del:	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	7.6	xxxxx	xxxxxx	7.9	xxxxx	xxxxx			
LOS by Move:	*	*	*	*	*	*	A	*	*	A	*	*			
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxxx	760	xxxxx	xxxxx	264	xxxxx	xxxxx	xxxxx	xxxxxx	xxxxx	xxxxx	xxxxx	xxxxxx		
SharedQueue:	xxxxx	1.0	xxxxx	xxxxx	10.8	xxxxx	xxxxx	xxxxx	xxxxxx	xxxxx	xxxxx	xxxxx	xxxxxx		
Shrd StpDel:	xxxxx	11.3	xxxxx	xxxxx	108	xxxxx	xxxxx	xxxxx	xxxxxx	xxxxx	xxxxx	xxxxx	xxxxxx		
Shared LOS:	*	B	*	*	F	*	*	*	*	*	*	*	*		
ApproachDel:		11.3			107.7			xxxxxx		xxxxxx					
ApproachLOS:		B			F			*		*					

## Athens Connector

## Level Of Service Computation Report

2000 HCM Unsignalized Method (Base Volume Alternative)

\*\*\*\*\*  
Intersection #5 Sunset / Placer Corp Center  
\*\*\*\*\*Average Delay (sec/veh): 1.5 Worst Case Level Of Service: A[ 9.4]  
\*\*\*\*\*

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

Control: Stop Sign Stop Sign Uncontrolled Uncontrolled

Rights: Include Include Include Include

Lanes: 0 0 0 0 0 0 0 0 1 0 0 0 0 0 0 0 2 0 1

## Volume Module:

Base Vol: 0 0 0 0 0 88 0 0 0 0 0 240 222

Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Initial Bse: 0 0 0 0 0 88 0 0 0 0 0 240 222

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 0.90 0.90 0.90 0.90 0.90 0.90 0.90 0.90 0.90 0.90 0.90 0.90 0.90

PHF Volume: 0 0 0 0 0 98 0 0 0 0 0 267 247

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0

Final Vol.: 0 0 0 0 0 98 0 0 0 0 0 267 247

## Critical Gap Module:

Critical Gp:xxxxx xxxx xxxx xxxx xxxx 6.3 xxxx xxxx xxxx xxxx xxxx xxxx

FollowUpTim:xxxxx xxxx xxxx xxxx xxxx 3.3 xxxx xxxx xxxx xxxx xxxx xxxx

## Capacity Module:

Cnflct Vol: xxxx xxxx xxxx xxxx xxxx 133 xxxx xxxx xxxx xxxx xxxx xxxx

Potent Cap.: xxxx xxxx xxxx xxxx xxxx 908 xxxx xxxx xxxx xxxx xxxx xxxx

Move Cap.: xxxx xxxx xxxx xxxx xxxx 908 xxxx xxxx xxxx xxxx xxxx xxxx

Volume/Cap: xxxx xxxx xxxx xxxx xxxx 0.11 xxxx xxxx xxxx xxxx xxxx xxxx

## Level Of Service Module:

Queue: xxxxx xxxx xxxx xxxx xxxx 0.4 xxxx xxxx xxxx xxxx xxxx xxxx

Stopped Del:xxxxx xxxx xxxx xxxx xxxx 9.4 xxxx xxxx xxxx xxxx xxxx xxxx

LOS by Move: \* \* \* \* \* A \* \* \* \* \* \* \*

Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT

Shared Cap.: xxxx xxxx

SharedQueue:xxxxx xxxx xxxx xxxx xxxx xxxx xxxx xxxx xxxx xxxx xxxx

Shrd StpDel:xxxxx xxxx xxxx xxxx xxxx xxxx xxxx xxxx xxxx xxxx xxxx

Shared LOS: \* \* \* \* \* \* \* \* \* \* \* \* \*

ApproachDel: xxxxxx 9.4 xxxxxxxx xxxxxx

ApproachLOS: \* A \* \*

## Athens Connector

## Level Of Service Computation Report

2000 HCM Unsigned Method (Base Volume Alternative)

Intersection #6 Sunset / S. Loop

Average Delay (sec/veh): 5.1 Worst Case Level Of Service: C[ 16.2]

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Stop Sign	Stop Sign	Uncontrolled	Uncontrolled
Rights:	Include	Include	Include	Include
Lanes:	0 0 0 0 1	0 0 0 0 0	0 0 2 0 1	0 0 0 0 0

## Volume Module:

Base Vol:	0 0 283	0 0 0	0 513	97 0 0 0
Growth Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00 1.00
Initial Bse:	0 0 283	0 0 0	0 513	97 0 0 0
User Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00 1.00
PHF Adj:	0.75 0.75 0.75	0.75 0.75 0.75	0.75 0.75 0.75	0.75 0.75 0.75 0.75
PHF Volume:	0 0 377	0 0 0	0 684	129 0 0 0
Reduct Vol:	0 0 0	0 0 0	0 0 0	0 0 0 0
Final Vol.:	0 0 377	0 0 0	0 684	129 0 0 0

## Critical Gap Module:

Critical Gp:xxxxx xxxx	6.3 xxxxx xxxx xxxx xxxx xxxx xxxx xxxx xxxx xxxx xxxx
FollowUpTim:xxxxx xxxx	3.3 xxxxx xxxx xxxx xxxx xxxx xxxx xxxx xxxx xxxx

## Capacity Module:

Cnflict Vol: xxxx xxxx	342 xxxx xxxx xxxx xxxx xxxx xxxx xxxx xxxx xxxx
Potent Cap.: xxxx xxxx	694 xxxx xxxx xxxx xxxx xxxx xxxx xxxx xxxx
Move Cap.: xxxx xxxx	694 xxxx xxxx xxxx xxxx xxxx xxxx xxxx xxxx
Volume/Cap:	xxxx xxxx 0.54 xxxx xxxx xxxx xxxx xxxx xxxx xxxx

## Level Of Service Module:

Queue: xxxxx xxxx	3.3 xxxxx xxxx xxxx xxxx xxxx xxxx xxxx xxxx
Stopped Del:xxxxx xxxx	16.2 xxxxx xxxx xxxx xxxx xxxx xxxx xxxx xxxx
LOS by Move:	* * C * * * * * * * *
Movement:	LT - LTR - RT
Shared Cap.:	xxxxx xxxx
SharedQueue:	xxxxx xxxx
Shrd StpDel:	xxxxx xxxx
Shared LOS:	* * * * * * * * * * * *
ApproachDel:	16.2 xxxxxx
ApproachLOS:	C *

## Athens Connector

## Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

\*\*\*\*\*  
Intersection #7 Sunset / SR-65  
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap. (X): 0.950  
 Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 42.3  
 Optimal Cycle: 139 Level Of Service: D  
 \*\*\*\*\*

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Protected	Protected	Protected	Protected
Rights:	Ovl	Ovl	Ignore	Ovl
Min. Green:	3 7 7	3 7 7	3 7 7	3 7 7
Lanes:	2 0 2 0 1	2 0 2 0 1	1 0 1 0 1	2 0 2 0 1

 \*\*\*\*\*

## Volume Module:

Base Vol:	340	1631	111	262	1418	22	43	104	628	557	105	271
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	340	1631	111	262	1418	22	43	104	628	557	105	271
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Adj:	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.00	0.93	0.93	0.93
PHF Volume:	366	1754	119	282	1525	24	46	112	0	599	113	291
Reduc Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	366	1754	119	282	1525	24	46	112	0	599	113	291
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Final Vol.:	366	1754	119	282	1525	24	46	112	0	599	113	291

 \*\*\*\*\*

## Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.88	0.90	0.81	0.88	0.90	0.81	0.90	0.95	1.00	0.88	0.90	0.81
Lanes:	2.00	2.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00	2.00	2.00	1.00
Final Sat.:	3334	3437	1537	3334	3437	1537	1718	1809	1900	3334	3437	1537

 \*\*\*\*\*

## Capacity Analysis Module:

Vol/Sat:	0.11	0.51	0.08	0.08	0.44	0.02	0.03	0.06	0.00	0.18	0.03	0.19
Crit Moves:	****	****					****		****			
Green/Cycle:	0.12	0.53	0.72	0.09	0.50	0.53	0.03	0.07	0.00	0.19	0.23	0.32
Volume/Cap:	0.89	0.96	0.11	0.96	0.89	0.03	0.90	0.88	0.00	0.96	0.14	0.60
Delay/Veh:	63.7	34.5	4.2	85.9	28.8	11.3	136.1	92.5	0.0	65.6	30.9	30.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	63.7	34.5	4.2	85.9	28.8	11.3	136.1	92.5	0.0	65.6	30.9	30.9
HCM2kAvg:	9	31	1	8	25	0	3	6	0	14	1	8

 \*\*\*\*\*

## Athens Connector

## Level Of Service Computation Report

2000 HCM Unsignalized Method (Base Volume Alternative)

\*\*\*\*\*  
Intersection #9 Athens / Athens Connector  
\*\*\*\*\*Average Delay (sec/veh): 3.2 Worst Case Level Of Service: B[ 13.2]  
\*\*\*\*\*

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Stop Sign	Stop Sign	Uncontrolled	Uncontrolled
Rights:	Include	Include	Include	Include
Lanes:	1 0 0 0 1	0 0 0 0 0	0 0 1 0 1	1 0 1 0 0

## Volume Module:

Base Vol:	140	0	10	0	0	0	0	161	117	10	199	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	140	0	10	0	0	0	0	161	117	10	199	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
PHF Volume:	156	0	11	0	0	0	0	179	130	11	221	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	156	0	11	0	0	0	0	179	130	11	221	0

## Critical Gap Module:

Critical Gp:	6.4 xxxx	6.3 xxxx	4.1 xxxx	xxxx						
FollowUpTim:	3.5 xxxx	3.3 xxxx	2.2 xxxx	xxxx						

## Capacity Module:

Cnflict Vol:	422 xxxx	179	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	309	xxxx	xxxx
Potent Cap.:	583 xxxx	856	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	1235	xxxx	xxxx
Move Cap.:	579 xxxx	856	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	1235	xxxx	xxxx
Volume/Cap:	0.27 xxxx	0.01	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	0.01	xxxx	xxxx

## Level Of Service Module:

Queue:	1.1 xxxx	0.0	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	0.0	xxxx	xxxx
Stopped Del:	13.5 xxxx	9.3	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	7.9	xxxx	xxxx
LOS by Move:	B *	A *	*	*	*	*	*	*	A *	*	*
Movement:	LT - LTR - RT										
Shared Cap.:	xxxx										
SharedQueue:	xxxx										
Shrd StpDel:	xxxx										
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:	13.2		xxxxxx								
ApproachLOS:	B		*		*		*		*		*

**CUMULATIVE NO PROJECT  
LEVEL OF SERVICE CALCULATIONS**

## Athens Connector

## Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

\*\*\*\*\*  
Intersection #1 Industrial / Athens  
\*\*\*\*\*

Cycle (sec):	100	Critical Vol./Cap. (X):	0.598		
Loss Time (sec):	9 (Y+R = 4 sec)	Average Delay (sec/veh):	22.7		
Optimal Cycle:	41	Level Of Service:	C		
Approach:	North Bound	South Bound	East Bound	West Bound	
Movement:	L - T - R	L - T - R	L - T - R	L - T - R	
Control:	Protected	Protected	Protected	Protected	
Rights:	Include	Ovl	Ovl	Include	
Min. Green:	3 7 0	0 0 7	7 0 0	7 0 0 0	
Lanes:	2 0 1 0 0	0 0 1 0 1	1 0 0 0 1	0 0 0 0 0	
Volume Module:					
Base Vol:	182 408 0 0 383	120 336 0 207 0 0 0			
Growth Adj:	1.00 1.00 1.00 1.00 1.00	1.00 1.00 1.00 1.00 1.00			
Initial Bse:	182 408 0 0 383	120 336 0 207 0 0 0			
User Adj:	1.21 1.21 1.00 1.00 0.89	0.89 1.25 1.00 1.25 1.00 1.00			
PHF Adj:	0.95 0.95 0.95 0.95 0.95	0.95 0.95 0.95 0.95 0.95			
PHF Volume:	232 520 0 0 359	112 442 0 272 0 0 0			
Reduct Vol:	0 0 0 0 0	0 0 0 0 0			
Reduced Vol:	232 520 0 0 359	112 442 0 272 0 0 0			
PCE Adj:	1.00 1.00 1.00 1.00 1.00	1.00 1.00 1.00 1.00 1.00			
MLF Adj:	1.00 1.00 1.00 1.00 1.00	1.00 1.00 1.00 1.00 1.00			
Final Vol.:	232 520 0 0 359	112 442 0 272 0 0 0			
Saturation Flow Module:					
Sat/Lane:	1900 1900 1900 1900 1900	1900 1900 1900 1900 1900			
Adjustment:	0.88 0.95 1.00 1.00 0.95	0.81 0.90 1.00 0.81 1.00			
Lanes:	2.00 1.00 0.00 0.00 1.00	1.00 1.00 0.00 1.00 0.00			
Final Sat.:	3334 1809 0 0 1809	1537 1718 0 1537 0 0 0			
Capacity Analysis Module:					
Vol/Sat:	0.07 0.29 0.00 0.00 0.20	0.07 0.26 0.00 0.18 0.00			
Crit Moves:	****	****	****		
Green/Cycle:	0.12 0.48 0.00 0.00 0.36	0.79 0.43 0.00 0.55 0.00			
Volume/Cap:	0.56 0.60 0.00 0.00 0.56	0.09 0.60 0.00 0.32 0.00			
Delay/Veh:	42.9 20.1 0.0 0.0 27.0	2.5 23.2 0.0 12.3 0.0			
User DelAdj:	1.00 1.00 1.00 1.00 1.00	1.00 1.00 1.00 1.00 1.00			
AdjDel/Veh:	42.9 20.1 0.0 0.0 27.0	2.5 23.2 0.0 12.3 0.0			
HCM2kAvg:	4 12 0 0 9	1 11 0 5 0 0 0			

## Athens Connector

## Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

Intersection #2 Industrial / Placer Corp Center

Cycle (sec): 100 Critical Vol./Cap. (X): 1.109  
 Loss Time (sec): 9 (Y+R = 4 sec) Average Delay (sec/veh): 59.3  
 Optimal Cycle: 180 Level Of Service: E

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Protected	Protected	Protected	Protected
Rights:	Include	Include	Include	Ovl
Min. Green:	0 7 7	3 7 0	0 0 0	0 3 0 3
Lanes:	0 0 1 0 1	1 0 1 0 0	0 0 0 0 0	1 0 0 0 1

Volume Module:

Base Vol:	0 538 61 96 1328	0 0 0 0	257 0 241
Growth Adj:	1.00 0.97 0.97 1.10 1.10	1.00 1.00 1.00 1.00	1.01 1.00 1.01
Initial Bse:	0 522 59 106 1461	0 0 0 0	260 0 243
User Adj:	1.00 1.00 1.00 1.00 1.00	1.00 1.00 1.00 1.00	1.00 1.00 1.00
PHF Adj:	0.95 0.95 0.95 0.95 0.95	0.95 0.95 0.95 0.95	0.95 0.95 0.95
PHF Volume:	0 549 62 111 1538	0 0 0 0	273 0 256
Reducet Vol:	0 0 0 0 0	0 0 0 0	0 0 0
Reduced Vol:	0 549 62 111 1538	0 0 0 0	273 0 256
PCE Adj:	1.00 1.00 1.00 1.00 1.00	1.00 1.00 1.00 1.00	1.00 1.00 1.00
MLF Adj:	1.00 1.00 1.00 1.00 1.00	1.00 1.00 1.00 1.00	1.00 1.00 1.00
Final Vol.:	0 549 62 111 1538	0 0 0 0	273 0 256

Saturation Flow Module:

Sat/Lane:	1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment:	1.00 0.95 0.81 0.90 0.95 1.00 1.00 1.00 1.00 0.90 1.00 0.81
Lanes:	0.00 1.00 1.00 1.00 1.00 0.00 0.00 0.00 0.00 1.00 0.00 1.00
Final Sat.:	0 1809 1537 1718 1809 0 0 0 0 1718 0 1537

Capacity Analysis Module:

Vol/Sat:	0.00 0.30 0.04 0.06 0.85 0.00 0.00 0.00 0.00 0.16 0.00 0.17
Crit Moves:	**** ****
Green/Cycle:	0.00 0.63 0.63 0.13 0.77 0.00 0.00 0.00 0.00 0.14 0.00 0.28
Volume/Cap:	0.00 0.48 0.06 0.48 1.11 0.00 0.00 0.00 0.00 1.11 0.00 0.60
Delay/Veh:	0.0 10.0 7.1 41.6 71.5 0.0 0.0 0.0 0.0 132.5 0.0 33.6
User DelAdj:	1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh:	0.0 10.0 7.1 41.6 71.5 0.0 0.0 0.0 0.0 132.5 0.0 33.6
HCM2kAvg:	0 9 1 4 69 0 0 0 0 16 0 8

## Athens Connector

## Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

Intersection #3 Industrial / S. Loop

Cycle (sec): 100 Critical Vol./Cap. (X): 0.910  
 Loss Time (sec): 9 (Y+R = 4 sec) Average Delay (sec/veh): 31.3  
 Optimal Cycle: 108 Level Of Service: C

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Protected	Protected	Permitted	Permitted
Rights:	Include	Include	Include	Ovl
Min. Green:	0 7 7	3 7 0	0 0 0	3 0 3
Lanes:	0 0 1 0 1	1 0 1 0 0	0 0 0 0 0	1 0 0 0 1

Volume Module:												
Base Vol:	0	518	445	696	868	0	0	0	0	83	0	77
Growth Adj:	1.00	0.97	0.97	1.10	1.10	1.00	1.00	1.00	1.00	1.01	1.00	1.01
Initial Bse:	0	502	432	766	955	0	0	0	0	84	0	78
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	0	529	454	806	1005	0	0	0	0	88	0	82
Reduc Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	529	454	806	1005	0	0	0	0	88	0	82
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	0	529	454	806	1005	0	0	0	0	88	0	82

Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.95	0.81	0.90	0.95	1.00	1.00	1.00	1.00	0.73	1.00	0.81
Lanes:	0.00	1.00	1.00	1.00	1.00	0.00	0.00	0.00	0.00	1.00	0.00	1.00
Final Sat.:	0	1809	1537	1718	1809	0	0	0	0	1391	0	1537

Capacity Analysis Module:												
Vol/Sat:	0.00	0.29	0.30	0.47	0.56	0.00	0.00	0.00	0.00	0.06	0.00	0.05
Crit Moves:	*****	*****	*****	*****	*****					*****		
Green/Cycle:	0.00	0.32	0.32	0.52	0.84	0.00	0.00	0.00	0.00	0.07	0.00	0.59
Volume/Cap:	0.00	0.90	0.91	0.91	0.66	0.00	0.00	0.00	0.00	0.91	0.00	0.09
Delay/Veh:	0.0	49.1	53.0	35.3	4.0	0.0	0.0	0.0	0.0	109.1	0.0	9.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	49.1	53.0	35.3	4.0	0.0	0.0	0.0	0.0	109.1	0.0	9.1
HCM2kAvg:	0	19	17	28	12	0	0	0	0	6	0	1

## Athens Connector

## Level Of Service Computation Report

2000 HCM Unsignalized Method (Base Volume Alternative)

\*\*\*\*\*  
Intersection #4 Sunset / Cincinnati  
\*\*\*\*\*Average Delay (sec/veh): OVERFLOW Worst Case Level Of Service: F[xxxxx]  
\*\*\*\*\*Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R  
-----|-----|-----|-----|-----|Control: Stop Sign Stop Sign Uncontrolled Uncontrolled  
Rights: Include Include Include Include  
Lanes: 0 0 1! 0 0 0 0 1! 0 0 0 0 1! 0 0 0 0 1! 0 0  
-----|-----|-----|-----|-----|

## Volume Module:

Base Vol:	230	9	587	409	9	155	80	707	55	191	489	132
Growth Adj:	1.02	1.00	1.01	1.01	1.00	1.02	1.02	1.02	1.02	1.00	1.00	1.00
Initial Bse:	235	9	593	413	9	158	82	721	56	191	489	132
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	247	9	624	435	9	166	86	759	59	201	515	139
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	247	9	624	435	9	166	86	759	59	201	515	139

## Critical Gap Module:

Critical Gp:	7.2	6.6	6.3	7.2	6.6	6.3	4.1	xxxx	xxxx	4.1	xxxx	xxxx
FollowUpTim:	3.5	4.0	3.3	3.5	4.0	3.3	2.2	xxxx	xxxx	2.2	xxxx	xxxx

## Capacity Module:

Cnflict Vol:	2035	2016	789	2264	1976	584	654	xxxx	xxxx	818	xxxx	xxxx
Potent Cap.:	41	57	386	28	61	506	919	xxxx	xxxx	797	xxxx	xxxx
Move Cap.:	17	37	386	0	39	506	919	xxxx	xxxx	797	xxxx	xxxx
Volume/Cap:	14.88	0.26	1.62	xxxx	0.24	0.33	0.09	xxxx	xxxx	0.25	xxxx	xxxx

## Level Of Service Module:

Queue:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	0.3	xxxx	xxxx	1.0	xxxx	xxxx
Stopped Del:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	9.3	xxxx	xxxx	11.0	xxxx	xxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	B	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	53	xxxx	xxxx	0	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx
SharedQueue:	xxxx	107	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx
Shrd StpDel:	xxxx	7235	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx
Shared LOS:	*	F	*	*	*	*	*	*	*	*	*	*
ApproachDel:	7235.3		xxxxxx			xxxxxx		xxxxxx		xxxxxx		xxxxxx
ApproachLOS:	F		F			*		*		*		*

## Athens Connector

## Level Of Service Computation Report

2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #5 Sunset / Placer Corp Center

Average Delay (sec/veh): 1.4 Worst Case Level Of Service: B[ 11.9]

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Stop Sign	Stop Sign	Uncontrolled	Uncontrolled
Rights:	Include	Include	Include	Include
Lanes:	0 0 0 0 0	0 0 0 0 1	0 0 0 0 0	0 0 2 0 1

## Volume Module:

Base Vol:	0 0 0 0 0	157	0 0 0 0 0	0 656 498
Growth Adj:	1.00 1.00 1.00 1.00 1.00	1.01	1.00 1.00 1.00 1.00 1.00	1.00 1.01 1.10
Initial Bse:	0 0 0 0 0	159	0 0 0 0 0	0 663 548
User Adj:	1.00 1.00 1.00 1.00 1.00	1.00	1.00 1.00 1.00 1.00 1.00	1.00 1.00 1.00
PHF Adj:	0.95 0.95 0.95 0.95 0.95	0.95	0.95 0.95 0.95 0.95 0.95	0.95 0.95 0.95
PHF Volume:	0 0 0 0 0	167	0 0 0 0 0	0 697 577
Reduct Vol:	0 0 0 0 0	0	0 0 0 0 0	0 0 0 0 0
Final Vol.:	0 0 0 0 0	167	0 0 0 0 0	0 697 577

## Critical Gap Module:

Critical Gp:	xxxxx xxxx xxxx xxxx xxxx	6.3	xxxxx xxxx xxxx xxxx xxxx xxxx
FollowUpTim:	xxxxx xxxx xxxx xxxx xxxx	3.3	xxxxx xxxx xxxx xxxx xxxx xxxx

## Capacity Module:

Cnflict Vol:	xxxxx xxxx xxxx xxxx xxxx	349	xxxxx xxxx xxxx xxxx xxxx
Potent Cap.:	xxxxx xxxx xxxx xxxx xxxx	688	xxxxx xxxx xxxx xxxx xxxx
Move Cap.:	xxxxx xxxx xxxx xxxx xxxx	688	xxxxx xxxx xxxx xxxx xxxx
Volume/Cap:	xxxxx xxxx xxxx xxxx xxxx	0.24	xxxxx xxxx xxxx xxxx xxxx

## Level Of Service Module:

Queue:	xxxxx xxxx xxxx xxxx xxxx	0.9	xxxxx xxxx xxxx xxxx xxxx						
Stopped Del:	xxxxx xxxx xxxx xxxx xxxx	11.9	xxxxx xxxx xxxx xxxx xxxx						
LOS by Move:	*	*	*	*	*	*	*	*	*
Movement:	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT					
Shared Cap.:	xxxxx xxxx xxxx xxxx xxxx	xxxxx xxxx xxxx xxxx	xxxxx xxxx xxxx xxxx	xxxxx xxxx xxxx					
SharedQueue:	xxxxx xxxx xxxx xxxx xxxx	xxxxx xxxx xxxx xxxx	xxxxx xxxx xxxx xxxx	xxxxx xxxx xxxx					
Shrd StpDel:	xxxxx xxxx xxxx xxxx xxxx	xxxxx xxxx xxxx xxxx	xxxxx xxxx xxxx xxxx	xxxxx xxxx xxxx					
Shared LOS:	*	*	*	*	*	*	*	*	*
ApproachDel:	xxxxxx	11.9	xxxxxx	xxxxxx					
ApproachLOS:	*	B	*	*					

## Athens Connector

## Level Of Service Computation Report

2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #6 Sunset / S. Loop

Average Delay (sec/veh): 424.1 Worst Case Level Of Service: F[1054.1]

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Stop Sign	Stop Sign	Uncontrolled	Uncontrolled
Rights:	Include	Include	Include	Include
Lanes:	0 0 0 0 1	0 0 0 0 0	0 0 2 0 1	0 0 0 0 0

## Volume Module:

Base Vol:	0 0 1142	0 0 0	0 1543 160	0 0 0
Growth Adj:	1.00 1.00	1.01 1.00	1.00 1.00 1.01	0.97 1.00 1.00
Initial Bse:	0 0 1153	0 0 0	0 1558 155	0 0 0
User Adj:	1.00 1.00	1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
PHF Adj:	0.95 0.95	0.95 0.95	0.95 0.95 0.95	0.95 0.95 0.95
PHF Volume:	0 0 1214	0 0 0	0 1640 163	0 0 0
Reduc Vol:	0 0 0	0 0 0	0 0 0	0 0 0
Final Vol.:	0 0 1214	0 0 0	0 1640 163	0 0 0

## Critical Gap Module:

Critical Gp:	xxxxx xxxx	6.3	xxxxx xxxx xxxx xxxx xxxx xxxx xxxx xxxx xxxx xxxx
FollowUpTim:	xxxxx xxxx	3.3	xxxxx xxxx xxxx xxxx xxxx xxxx xxxx xxxx xxxx xxxx

## Capacity Module:

Cnflict Vol:	xxxxx xxxx	820	xxxxx xxxx xxxx xxxx xxxx xxxx xxxx xxxx xxxx
Potent Cap.:	xxxxx xxxx	370	xxxxx xxxx xxxx xxxx xxxx xxxx xxxx xxxx xxxx
Move Cap.:	xxxxx xxxx	370	xxxxx xxxx xxxx xxxx xxxx xxxx xxxx xxxx xxxx
Volume/Cap:	xxxxx xxxx	3.28	xxxxx xxxx xxxx xxxx xxxx xxxx xxxx xxxx xxxx

## Level Of Service Module:

Queue:	xxxxx xxxx	109.6	xxxxx xxxx xxxx xxxx xxxx xxxx xxxx xxxx xxxx								
Stopped Del:	xxxxx xxxx	1054	xxxxx xxxx xxxx xxxx xxxx xxxx xxxx xxxx xxxx								
LOS by Move:	*	*	F *	*	*	*	*	*	*	*	*
Movement:	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT							
Shared Cap.:	xxxxx xxxx xxxx	xxxxx xxxx xxxx	xxxxx xxxx xxxx	xxxxx xxxx xxxx							
SharedQueue:	xxxxx xxxx xxxx	xxxxx xxxx xxxx	xxxxx xxxx xxxx	xxxxx xxxx xxxx							
Shrd StpDel:	xxxxx xxxx xxxx	xxxxx xxxx xxxx	xxxxx xxxx xxxx	xxxxx xxxx xxxx							
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:	1054.1		xxxxxx		xxxxxx		xxxxxx		xxxxxx		xxxxxx
ApproachLOS:	F		*		*		*		*		*

## Athens Connector

## Level Of Service Computation Report

2000 HCM Unsignalized Method (Base Volume Alternative)

\*\*\*\*\*  
Intersection #9 Athens / Athens Connector  
\*\*\*\*\*Average Delay (sec/veh): 0.0 Worst Case Level Of Service: [ 0.0]  
\*\*\*\*\*Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R  
-----|-----|-----|-----|-----|-----|-----|-----|Control: Stop Sign Stop Sign Uncontrolled Uncontrolled  
Rights: Include Include Include Include  
-----|-----|-----|-----|-----|-----|-----|-----|Lanes: 1 0 0 0 1 0 0 0 0 0 0 1 0 1 1 0 1 0 0  
-----|-----|-----|-----|-----|-----|-----|-----|

## Volume Module:

Base Vol:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Growth Adj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Initial Bse:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
User Adj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PHF Adj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PHF Volume:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Reduc Vol:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

## Critical Gap Module:

Critical Gp:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FollowUpTim:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

## Capacity Module:

Cnflict Vol:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Potent Cap.:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Move Cap.:	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Volume/Cap:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

## Level Of Service Module:

Queue:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Stopped Del:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

## LOS by Move:

Movement:	LT - LTR - RT																		
Shared Cap.:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
SharedQueue:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Shrd StpDel:	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0

## Shared LOS:

ApproachDel: 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0

## ApproachLOS:

## Athens Connector

## Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

Intersection #70 Sunset / SB SR-65 Ramps

Cycle (sec): 100 Critical Vol./Cap. (X): 0.758  
 Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): 12.8  
 Optimal Cycle: 94 Level Of Service: B

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R

Control:	Protected	Protected	Protected	Protected
Rights:	Include	Include	Include	Include
Min. Green:	0 0 0	0 0 0	0 0 0	0 0 0
Lanes:	0 0 0 0	2 0 0 0	2 0 0 0	0 0 2 0 0

## Volume Module:

Base Vol:	0 0 0	330 0 410	0 1931 0	0 883 0
Growth Adj:	1.00 1.00 1.00	1.01 1.00 1.01	1.00 1.01 1.00	1.00 0.99 1.00
Initial Bse:	0 0 0	333 0 414	0 1950 0	0 874 0
User Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
PHF Adj:	0.95 0.95 0.95	0.95 0.95 0.95	0.95 0.95 0.95	0.95 0.95 0.95
PHF Volume:	0 0 0	351 0 436	0 2053 0	0 920 0
Reduc Vol:	0 0 0	0 0 0	0 0 0	0 0 0
Reduced Vol:	0 0 0	351 0 436	0 2053 0	0 920 0
PCE Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
MLF Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
Final Vol.:	0 0 0	351 0 436	0 2053 0	0 920 0

## Saturation Flow Module:

Sat/Lane:	1900 1900 1900	1900 1900 1900	1900 1900 1900	1900 1900 1900
Adjustment:	1.00 1.00 1.00	0.88 1.00 0.71	1.00 0.90 1.00	1.00 0.90 1.00
Lanes:	0.00 0.00 0.00	2.00 0.00 2.00	0.00 2.00 0.00	0.00 2.00 0.00
Final Sat.:	0 0 0	3334 0 2706	0 3437 0	0 3437 0

## Capacity Analysis Module:

Vol/Sat:	0.00 0.00 0.00	0.11 0.00 0.16	0.00 0.60 0.00	0.00 0.27 0.00
Crit Moves:		****	****	****
Green/Cycle:	0.00 0.00 0.00	0.21 0.00 0.21	0.00 0.79 0.00	0.00 0.79 0.00
Volume/Cap:	0.00 0.00 0.00	0.50 0.00 0.76	0.00 0.76 0.00	0.00 0.34 0.00
Delay/Veh:	0.0 0.0 0.0	35.2 0.0 42.8	0.0 6.9 0.0	0.0 3.2 0.0
User DelAdj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
AdjDel/Veh:	0.0 0.0 0.0	35.2 0.0 42.8	0.0 6.9 0.0	0.0 3.2 0.0
HCM2kAvg:	0 0 0	5 0 8	0 18 0	0 4 0

## Athens Connector

## Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

Intersection #80 Sunset / NB SR-65 Ramps

Cycle (sec): 100 Critical Vol./Cap. (X): 0.571  
 Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): 9.6  
 Optimal Cycle: 53 Level Of Service: A

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Protected	Protected	Protected	Protected
Rights:	Include	Include	Include	Include
Min. Green:	0 0 0	0 0 0	0 0 0	0 0 0
Lanes:	2 0 0 0	2 0 0 0	0 0 2 0	0 0 2 0

## Volume Module:

Base Vol:	331	0	226	0	0	0	0	1507	0	0	906	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	331	0	226	0	0	0	0	1507	0	0	906	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.01	1.00	1.00	0.99	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	348	0	238	0	0	0	0	1602	0	0	944	0
Reduc Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	348	0	238	0	0	0	0	1602	0	0	944	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	348	0	238	0	0	0	0	1602	0	0	944	0

## Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.88	1.00	0.71	1.00	1.00	1.00	1.00	0.90	1.00	1.00	0.90	1.00
Lanes:	2.00	0.00	2.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00
Final Sat.:	3334	0	2706	0	0	0	0	3437	0	0	3437	0

## Capacity Analysis Module:

Vol/Sat:	0.10	0.00	0.09	0.00	0.00	0.00	0.00	0.47	0.00	0.00	0.27	0.00
Crit Moves:	****							****				****
Green/Cycle:	0.18	0.00	0.18	0.00	0.00	0.00	0.00	0.82	0.00	0.00	0.82	0.00
Volume/Cap:	0.57	0.00	0.48	0.00	0.00	0.00	0.00	0.57	0.00	0.00	0.34	0.00
Delay/Veh:	38.6	0.0	37.3	0.0	0.0	0.0	0.0	3.4	0.0	0.0	2.4	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	38.6	0.0	37.3	0.0	0.0	0.0	0.0	3.4	0.0	0.0	2.4	0.0
HCM2kAvg:	6	0	4	0	0	0	0	9	0	0	4	0

**CUMULATIVE PLUS PROJECT  
LEVEL OF SERVICE CALCULATIONS**

## Athens Connector

## Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

## Intersection #1 Industrial / Athens

Cycle (sec): 100 Critical Vol./Cap. (X): 0.534  
 Loss Time (sec): 9 (Y+R = 4 sec) Average Delay (sec/veh): 21.1  
 Optimal Cycle: 36 Level Of Service: C

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Protected	Protected	Protected	Protected
Rights:	Include	Ovl	Ovl	Include
Min. Green:	3 7 0	0 7 7	7 0 7	0 0 0
Lanes:	2 0 1 0 0	0 0 1 0 1	1 0 0 0 1	0 0 0 0 0

## Volume Module:

Base Vol:	182	408	0	0	383	120	336	0	207	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	182	408	0	0	383	120	336	0	207	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	192	429	0	0	403	126	354	0	218	0	0	0
Reduc Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	192	429	0	0	403	126	354	0	218	0	0	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	192	429	0	0	403	126	354	0	218	0	0	0

## Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.88	0.95	1.00	1.00	0.95	0.81	0.90	1.00	0.81	1.00	1.00	1.00
Lanes:	2.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00	0.00	0.00	0.00
Final Sat.:	3334	1809	0	0	1809	1537	1718	0	1537	0	0	0

## Capacity Analysis Module:

Vol/Sat:	0.06	0.24	0.00	0.00	0.22	0.08	0.21	0.00	0.14	0.00	0.00	0.00
Crit Moves:	****		****		****							
Green/Cycle:	0.11	0.52	0.00	0.00	0.42	0.80	0.39	0.00	0.49	0.00	0.00	0.00
Volume/Cap:	0.53	0.45	0.00	0.00	0.53	0.10	0.53	0.00	0.29	0.00	0.00	0.00
Delay/Veh:	43.8	15.2	0.0	0.0	22.6	2.2	24.6	0.0	15.2	0.0	0.0	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	43.8	15.2	0.0	0.0	22.6	2.2	24.6	0.0	15.2	0.0	0.0	0.0
HCM2kAvg:	4	8	0	0	10	1	9	0	4	0	0	0

## Athens Connector

## Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

\*\*\*\*\*  
Intersection #2 Industrial / Placer Corp Center  
\*\*\*\*\*

Cycle (sec):	100	Critical Vol./Cap. (X):	1.022
Loss Time (sec):	9 (Y+R = 4 sec)	Average Delay (sec/veh):	40.0
Optimal Cycle:	180	Level Of Service:	D

\*\*\*\*\*

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Protected	Protected	Protected	Protected
Rights:	Include	Include	Include	Ovl
Min. Green:	0 7 7	3 7 0	0 0 0	3 0 3
Lanes:	0 0 1 0 1	1 0 1 0 0	0 0 0 0 0	1 0 0 0 1

\*\*\*\*\*

## Volume Module:

Base Vol:	0 538 61	96 1328	0 0 0 0	257 0 241
Growth Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
Initial Bse:	0 538 61	96 1328	0 0 0	257 0 241
User Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
PHF Adj:	0.95 0.95 0.95	0.95 0.95 0.95	0.95 0.95 0.95	0.95 0.95 0.95
PHF Volume:	0 566 64	101 1398	0 0 0	271 0 254
Reduc Vol:	0 0 0	0 0 0	0 0 0	0 0 0
Reduced Vol:	0 566 64	101 1398	0 0 0	271 0 254
PCE Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
MLF Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
Final Vol.:	0 566 64	101 1398	0 0 0	271 0 254

\*\*\*\*\*

## Saturation Flow Module:

Sat/Lane:	1900 1900 1900	1900 1900 1900	1900 1900 1900	1900 1900 1900
Adjustment:	1.00 0.95 0.81	0.90 0.95 1.00	1.00 1.00 1.00	0.90 1.00 0.81
Lanes:	0.00 1.00 1.00	1.00 1.00 1.00	0.00 0.00 0.00	0.00 1.00 0.00
Final Sat.:	0 1809 1537	1718 1809	0 0 0	1718 0 1537

\*\*\*\*\*

## Capacity Analysis Module:

Vol/Sat:	0.00 0.31 0.04	0.06 0.77	0.00 0.00 0.00	0.00 0.16 0.00	0.17
Crit Moves:	****	****		****	
Green/Cycle:	0.00 0.64	0.64 0.12	0.76 0.00	0.00 0.15 0.00	0.27
Volume/Cap:	0.00 0.49	0.07 0.49	1.02 0.00	0.00 1.02 0.00	0.60
Delay/Veh:	0.0 10.0	6.9 43.0	42.3 0.0	0.0 0.0 0.0	103.5 0.0 34.1
User DelAdj:	1.00 1.00	1.00 1.00	1.00 1.00	1.00 1.00 1.00	1.00
AdjDel/Veh:	0.0 10.0	6.9 43.0	42.3 0.0	0.0 0.0 0.0	103.5 0.0 34.1
HCM2kAvg:	0 9	1 4	54 0	0 0 0	14 0 8

\*\*\*\*\*

## Athens Connector

## Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

Intersection #3 Industrial / S. Loop

Cycle (sec): 100 Critical Vol./Cap. (X): 0.880

Loss Time (sec): 9 (Y+R = 4 sec) Average Delay (sec/veh): 28.6

Optimal Cycle: 93 Level Of Service: C

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Permitted Permitted

Rights: Include Include Include Ovl

Min. Green: 0 7 7 3 7 0 0 0 0 0 3 0 3

Lanes: 0 0 1 0 1 1 0 1 0 0 0 0 1 0 0 0 1

## Volume Module:

Base Vol: 0 522 455 696 889 0 0 0 0 83 0 77

Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Initial Bse: 0 522 455 696 889 0 0 0 0 83 0 77

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95

PHF Volume: 0 549 479 733 936 0 0 0 0 87 0 81

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 0 549 479 733 936 0 0 0 0 87 0 81

PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Final Vol.: 0 549 479 733 936 0 0 0 0 87 0 81

## Saturation Flow Module:

Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900

Adjustment: 1.00 0.95 0.81 0.90 0.95 1.00 1.00 1.00 1.00 0.73 1.00 0.81

Lanes: 0.00 1.00 1.00 1.00 1.00 0.00 0.00 0.00 0.00 1.00 0.00 1.00

Final Sat.: 0 1809 1537 1718 1809 0 0 0 0 1391 0 1537

## Capacity Analysis Module:

Vol/Sat: 0.00 0.30 0.31 0.43 0.52 0.00 0.00 0.00 0.00 0.06 0.00 0.05

Crit Moves: \*\*\*\*\* \*\*\*\*\* \*\*\*\*\*

Green/Cycle: 0.00 0.35 0.35 0.48 0.84 0.00 0.00 0.00 0.00 0.07 0.00 0.56

Volume/Cap: 0.00 0.86 0.88 0.88 0.62 0.00 0.00 0.00 0.00 0.88 0.00 0.09

Delay/Veh: 0.0 41.1 45.6 33.8 3.5 0.0 0.0 0.0 0.0 99.8 0.0 10.5

User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

AdjDel/Veh: 0.0 41.1 45.6 33.8 3.5 0.0 0.0 0.0 0.0 99.8 0.0 10.5

HCM2kAvg: 0 19 17 24 10 0 0 0 0 6 0 1

## Athens Connector

## Level Of Service Computation Report

2000 HCM Unsignalized Method (Base Volume Alternative)

\*\*\*\*\*  
Intersection #4 Sunset / Cincinnati  
\*\*\*\*\*Average Delay (sec/veh): OVERFLOW Worst Case Level Of Service: F[xxxxx]  
\*\*\*\*\*

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

Control: Stop Sign Stop Sign Uncontrolled Uncontrolled

Rights: Include Include Include Include

Lanes: 0 0 1! 0 0 0 0 1! 0 0 1 0 1 1 0 1 0 1 1 0

## Volume Module:

Base Vol: 230 9 587 409 9 155 55 707 80 191 489 132

Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Initial Bse: 230 9 587 409 9 155 55 707 80 191 489 132

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95

PHF Volume: 242 9 618 431 9 163 58 744 84 201 515 139

Reduc Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Final Vol.: 242 9 618 431 9 163 58 744 84 201 515 139

## Critical Gap Module:

Critical Gp: 7.6 6.6 7.0 7.6 6.6 7.0 4.2 xxxx xxxx 4.2 xxxx xxxx

FollowUpTim: 3.6 4.1 3.3 3.6 4.1 3.3 2.3 xxxx xxxx 2.3 xxxx xxxx

## Capacity Module:

Cnflict Vol: 1566 1958 414 1479 1931 327 654 xxxx xxxx 828 xxxx xxxx

Potent Cap.: 73 61 579 85 63 660 909 xxxx xxxx 780 xxxx xxxx

Move Cap.: 35 42 579 0 44 660 909 xxxx xxxx 780 xxxx xxxx

Volume/Cap: 6.85 0.22 1.07 xxxx 0.22 0.25 0.06 xxxx xxxx 0.26 xxxx xxxx

## Level Of Service Module:

Queue: xxxx xxxx xxxx xxxx xxxx 0.2 xxxx xxxx 1.0 xxxx xxxx

Stopped Del:xxxxx xxxx xxxx xxxx xxxx 9.2 xxxx xxxx 11.2 xxxx xxxx

LOS by Move: \* \* \* \* \* A \* \* B \* \*

Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT

Shared Cap.: xxxx 107 xxxx 0 xxxx xxxx xxxx xxxx xxxx xxxx xxxx

SharedQueue:xxxxx 98.6 xxxx xxxx xxxx xxxx xxxx xxxx xxxx xxxx xxxx

Shrd StpDel:xxxxx 3290 xxxx xxxx xxxx xxxx xxxx xxxx xxxx xxxx xxxx

Shared LOS: \* F \* \* \* \* \* \* \* \* . \* \*

ApproachDel: 3290.2 xxxxxx xxxxxxxx xxxxxxxx xxxxxxxx

ApproachLOS: F F \* \*

## Athens Connector

## Level Of Service Computation Report

2000 HCM Unsigned Method (Base Volume Alternative)

Intersection #5 Sunset / Placer Corp Center

Average Delay (sec/veh): 1.4 Worst Case Level Of Service: B[ 11.8]

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Stop Sign	Stop Sign	Uncontrolled	Uncontrolled
Rights:	Include	Include	Include	Include
Lanes:	0 0 0 0 0	0 0 0 0 1	0 0 0 0 0	0 0 2 0 1

## Volume Module:

Base Vol:	0 0 0 0 0	157	0 0 0 0 0	0 656 498
Growth Adj:	1.00 1.00 1.00 1.00 1.00	1.00	1.00 1.00 1.00 1.00 1.00	1.00 1.00 1.00
Initial Bse:	0 0 0 0 0	157	0 0 0 0 0	0 656 498
User Adj:	1.00 1.00 1.00 1.00 1.00	1.00	1.00 1.00 1.00 1.00 1.00	1.00 1.00 1.00
PHF Adj:	0.95 0.95 0.95 0.95 0.95	0.95	0.95 0.95 0.95 0.95 0.95	0.95 0.95 0.95
PHF Volume:	0 0 0 0 0	165	0 0 0 0 0	0 691 524
Reduct Vol:	0 0 0 0 0	0	0 0 0 0 0	0 0 0 0
Final Vol.:	0 0 0 0 0	165	0 0 0 0 0	0 691 524

## Critical Gap Module:

Critical Gp:	xxxxx xxxx xxxx xxxx xxxx	6.3	xxxxx xxxx xxxx xxxx xxxx xxxx
FollowUpTim:	xxxxx xxxx xxxx xxxx xxxx	3.3	xxxxx xxxx xxxx xxxx xxxx xxxx

## Capacity Module:

Cnflict Vol:	xxxxx xxxx xxxx xxxx xxxx	345	xxxxx xxxx xxxx xxxx xxxx
Potent Cap.:	xxxxx xxxx xxxx xxxx xxxx	691	xxxxx xxxx xxxx xxxx xxxx
Move Cap.:	xxxxx xxxx xxxx xxxx xxxx	691	xxxxx xxxx xxxx xxxx xxxx
Volume/Cap:	xxxxx xxxx xxxx xxxx xxxx	0.24	xxxxx xxxx xxxx xxxx xxxx

## Level Of Service Module:

Queue:	xxxxx xxxx xxxx xxxx xxxx	0.9	xxxxx xxxx xxxx xxxx xxxx xxxx
Stopped Del:	xxxxx xxxx xxxx xxxx xxxx	11.8	xxxxx xxxx xxxx xxxx xxxx xxxx
LOS by Move:	* * * * *	B	* * * * *
Movement:	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT
Shared Cap.:	xxxxx xxxx xxxx xxxx xxxx	xxxxx xxxx xxxx xxxx	xxxxx xxxx xxxx
SharedQueue:	xxxxx xxxx xxxx xxxx xxxx	xxxxx xxxx xxxx xxxx	xxxxx xxxx xxxx
Shrd StpDel:	xxxxx xxxx xxxx xxxx xxxx	xxxxx xxxx xxxx xxxx	xxxxx xxxx xxxx
Shared LOS:	* * * * *	*	* * * * *
ApproachDel:	xxxxxx	11.8	xxxxxx
ApproachLOS:	*	B	*

## Athens Connector

## Level Of Service Computation Report

2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #6 Sunset / S. Loop

Average Delay (sec/veh): 410.9 Worst Case Level Of Service: F[1023.7]

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Stop Sign	Stop Sign	Uncontrolled	Uncontrolled
Rights:	Include	Include	Include	Include
Lanes:	0 0 0 0 2	0 0 0 0 0	0 0 2 0 1	0 0 0 0 0

## Volume Module:

Base Vol:	0 0 1142	0 0 0	0 0 1543	160 0 0 0
Growth Adj:	1.00 1.00	1.00 1.00	1.00 1.00	1.00 1.00 1.00 1.00
Initial Bse:	0 0 1142	0 0 0	0 0 1543	160 0 0 0
User Adj:	1.00 1.00	1.00 1.00	1.00 1.00	1.00 1.00 1.00 1.00
PHF Adj:	0.95 0.95	0.95 0.95	0.95 0.95	0.95 0.95 0.95 0.95
PHF Volume:	0 0 1202	0 0 0	0 0 1624	168 0 0 0
Reduc Vol:	0 0 0	0 0 0	0 0 0	0 0 0 0
Final Vol.:	0 0 1202	0 0 0	0 0 1624	168 0 0 0

## Critical Gap Module:

Critical Gp:xxxxx xxxx	6.3	xxxxx xxxx xxxx xxxx xxxx xxxx xxxx xxxx xxxx xxxx
FollowUpTim:xxxxx xxxx	3.3	xxxxx xxxx xxxx xxxx xxxx xxxx xxxx xxxx xxxx

## Capacity Module:

Cnflict Vol: xxxx xxxx	812	xxxx xxxx xxxx xxxx xxxx xxxx xxxx xxxx xxxx
Potent Cap.: xxxx xxxx	374	xxxx xxxx xxxx xxxx xxxx xxxx xxxx xxxx
Move Cap.: xxxx xxxx	374	xxxx xxxx xxxx xxxx xxxx xxxx xxxx xxxx
Volume/Cap: xxxx xxxx	3.21	xxxx xxxx xxxx xxxx xxxx xxxx xxxx xxxx

## Level Of Service Module:

Queue: xxxxx xxxx	107.7	xxxxx xxxx xxxx xxxx xxxx xxxx xxxx xxxx xxxx						
Stopped Del:xxxxx xxxx	1024	xxxxx xxxx xxxx xxxx xxxx xxxx xxxx xxxx xxxx						
LOS by Move: * * * F *	*	*	*	*	*	*	*	*
Movement: LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT					
Shared Cap.: xxxx xxxx xxxx	xxxx xxxx xxxx	xxxx xxxx xxxx	xxxx xxxx xxxx					
SharedQueue:xxxxx xxxx xxxx xxxx	xxxxx xxxx xxxx xxxx	xxxxx xxxx xxxx	xxxxx xxxx xxxx					
Shrd StpDel:xxxxx xxxx xxxx	xxxxx xxxx xxxx	xxxxx xxxx xxxx	xxxxx xxxx xxxx					
Shared LOS: * * * * *	*	*	*	*	*	*	*	
ApproachDel: 1023.7	xxxxxx	xxxxxx	xxxxxx					
ApproachLOS: F	*	*	*					

## Athens Connector

## Level Of Service Computation Report

2000 HCM Unsignalized Method (Base Volume Alternative)

\*\*\*\*\*  
Intersection #9 Athens / Athens Connector  
\*\*\*\*\*Average Delay (sec/veh): 17.0 Worst Case Level Of Service: E[ 46.1]  
\*\*\*\*\*

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Stop Sign	Stop Sign	Uncontrolled	Uncontrolled
Rights:	Include	Include	Include	Include
Lanes:	1 0 0 0 1	0 0 0 0 0	0 0 1 0 1	1 0 1 0 0

## Volume Module:

Base Vol:	270	0	190	0	0	0	0	217	342	183	150	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	270	0	190	0	0	0	0	217	342	183	150	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	284	0	200	0	0	0	0	228	360	193	158	0
Reduc Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	284	0	200	0	0	0	0	228	360	193	158	0

## Critical Gap Module:

Critical Gp:	6.4 xxxx	6.3	xxxxxx	xxxx	xxxxxx	xxxxx	xxxx	xxxxxx	4.1	xxxx	xxxxxx
FollowUpTim:	3.5 xxxx	3.3	xxxxxx	xxxx	xxxxxx	xxxxx	xxxx	xxxxxx	2.2	xxxx	xxxxxx

## Capacity Module:

Cnflict Vol:	772	xxxx	228	xxxxx	xxxx	xxxxxx	xxxx	xxxx	xxxxxx	588	xxxx	xxxxxx
Potent Cap.:	364	xxxx	803	xxxxx	xxxx	xxxxxx	xxxx	xxxx	xxxxxx	972	xxxx	xxxxxx
Move Cap.:	308	xxxx	803	xxxxx	xxxx	xxxxxx	xxxx	xxxx	xxxxxx	972	xxxx	xxxxxx
Volume/Cap:	0.92	xxxx	0.25	xxxx	xxxx	xxxxxx	xxxx	xxxx	xxxxxx	0.20	xxxx	xxxxxx

## Level Of Service Module:

Queue:	8.9	xxxx	1.0	xxxxxx	xxxx	xxxxxx	xxxxx	xxxx	xxxxxx	0.7	xxxx	xxxxxx
Stopped Del:	70.8	xxxx	11.0	xxxxxx	xxxx	xxxxxx	xxxxx	xxxx	xxxxxx	9.6	xxxx	xxxxxx
LOS by Move:	F	*	B	*	*	*	*	*	*	A	*	*
Movement:	LT -	LTR -	RT									
Shared Cap.:	xxxx	xxxx	xxxxxx									
SharedQueue:	xxxxxx	xxxx	xxxxxx	xxxx	xxxx	xxxxxx	xxxx	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx
Shrd StpDel:	xxxxxx	xxxx	xxxxxx	xxxx	xxxx	xxxxxx	xxxx	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:	46.1			xxxxxx			xxxxxx			xxxxxx		
ApproachLOS:	E			*			*			*		

## Athens Connector

## Level Of Service Computation Report

2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #10 Foothills / Sunset

Average Delay (sec/veh): 556.8 Worst Case Level Of Service: F[1408.1]

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Uncontrolled	Uncontrolled	Stop Sign	Stop Sign
Rights:	Include	Include	Include	Include
Lanes:	0 0 0 1 0	0 1 0 0 0	0 0 0 0 1	1 0 0 1 0

## Volume Module:

Base Vol:	0 200 616 226 299	0 0 0 0 0	614 0 260
Growth Adj:	1.00 1.00 1.00 1.00 1.00	1.00 1.00 1.00 1.00 1.00	1.00 1.00 1.00 1.00 1.00
Initial Bse:	0 200 616 226 299	0 0 0 0 0	614 0 260
User Adj:	1.00 1.00 1.00 1.00 1.00	1.00 1.00 1.00 1.00 1.00	1.00 1.00 1.00 1.00 1.00
PHF Adj:	0.95 0.95 0.95 0.95 0.95	0.95 0.95 0.95 0.95 0.95	0.95 0.95 0.95 0.95 0.95
PHF Volume:	0 211 648 238 315	0 0 0 0 0	646 0 274
Reduc Vol:	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0
Final Vol.:	0 211 648 238 315	0 0 0 0 0	646 0 274

## Critical Gap Module:

Critical Gp:xxxxx xxxx xxxx	4.1 xxxx xxxx xxxx xxxx xxxx	6.4 xxxx 6.3
FollowUpTim:xxxxx xxxx xxxx	2.2 xxxx xxxx xxxx xxxx xxxx	3.5 xxxx 3.3

## Capacity Module:

Cnflct Vol: xxxx xxxx xxxx	859 xxxx xxxx xxxx xxxx xxxx	1325 xxxx 535
Potent Cap.: xxxx xxxx xxxx	769 xxxx xxxx xxxx xxxx xxxx	169 xxxx 540
Move Cap.: xxxx xxxx xxxx	769 xxxx xxxx xxxx xxxx xxxx	122 xxxx 540
Volume/Cap: xxxx xxxx xxxx	0.31 xxxx xxxx xxxx xxxx xxxx	5.28 xxxx 0.51

## Level Of Service Module:

Queue: xxxx xxxx xxxx	1.3 xxxx xxxx xxxx xxxx xxxx	69.0 xxxx xxxx
Stopped Del:xxxxx xxxx xxxx	11.8 xxxx xxxx xxxx xxxx xxxx	1997 xxxx xxxx
LOS by Move: * * *	B * * * * * F * *	
Movement: LT - LTR - RT	LT - LTR - RT	LT - LTR - RT
Shared Cap.: xxxx xxxx xxxx	xxxx xxxx xxxx xxxx xxxx xxxx	540
SharedQueue:xxxxx xxxx xxxx	1.3 xxxx xxxx xxxx xxxx xxxx xxxx	2.8
Shrd StpDel:xxxxx xxxx xxxx	11.8 xxxx xxxx xxxx xxxx xxxx xxxx xxxx	18.3
Shared LOS: * * *	B * * * * * * C	
ApproachDel: xxxxxx	xxxxxxxx	1408.1
ApproachLOS:	*	F

## Athens Connector

## Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

Intersection #70 Sunset / SB SR-65 Ramps

Cycle (sec):	100	Critical Vol./Cap. (X):	0.825	
Loss Time (sec):	9 (Y+R = 4 sec)	Average Delay (sec/veh):	17.6	
Optimal Cycle:	75	Level Of Service:	B	
Approach:	North Bound	South Bound	East Bound	
Movement:	L - T - R	L - T - R	L - T - R	
Control:	Protected	Protected	Protected	
Rights:	Include	Ovl	Include	
Min. Green:	0 0 0	7 7 7	0 7 7	
Lanes:	0 0 0 0 0	2 0 0 0 2	0 0 2 0 0	
Volume Module:				
Base Vol:	0 0 0	330 0 410	0 1931 0	0 744 0
Growth Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
Initial Bse:	0 0 0	330 0 410	0 1931 0	0 744 0
User Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
PHF Adj:	0.95 0.95 0.95	0.95 0.95 0.95	0.95 0.95 0.95	0.95 0.95 0.95
PHF Volume:	0 0 0	347 0 432	0 2033 0	0 783 0
Reduc Vol:	0 0 0	0 0 0	0 0 0	0 0 0
Reduced Vol:	0 0 0	347 0 432	0 2033 0	0 783 0
PCE Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
MLF Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
Final Vol.:	0 0 0	347 0 432	0 2033 0	0 783 0
Saturation Flow Module:				
Sat/Lane:	1900 1900 1900	1900 1900 1900	1900 1900 1900	1900 1900 1900
Adjustment:	1.00 1.00 1.00	0.88 1.00 0.71	1.00 0.90 1.00	1.00 0.90 1.00
Lanes:	0.00 0.00 0.00	2.00 0.00 2.00	0.00 2.00 0.00	0.00 2.00 0.00
Final Sat.:	0 0 0	3334 0 2706	0 3437 0	0 3437 0
Capacity Analysis Module:				
Vol/Sat:	0.00 0.00 0.00	0.10 0.00 0.16	0.00 0.59 0.00	0.00 0.23 0.00
Crit Moves:	****			****
Green/Cycle:	0.00 0.00 0.00	0.19 0.00 0.19	0.00 0.72 0.00	0.00 0.72 0.00
Volume/Cap:	0.00 0.00 0.00	0.54 0.00 0.83	0.00 0.83 0.00	0.00 0.32 0.00
Delay/Veh:	0.0 0.0 0.0	37.2 0.0 49.1	0.0 12.2 0.0	0.0 5.3 0.0
User DelAdj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
AdjDel/Veh:	0.0 0.0 0.0	37.2 0.0 49.1	0.0 12.2 0.0	0.0 5.3 0.0
HCM2kAvg:	0 0 0	6 0 9	0 24 0	0 4 0

## Athens Connector

## Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

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Intersection #80 Sunset / NB SR-65 Ramps  
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Cycle (sec): 100 Critical Vol./Cap. (X): 0.622  
 Loss Time (sec): 9 (Y+R = 4 sec) Average Delay (sec/veh): 12.2  
 Optimal Cycle: 43 Level Of Service: B  
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Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Protected	Protected	Protected	Protected
Rights:	Ovl	Include	Include	Include
Min. Green:	7 7 7	0 0 0	0 0 7	0 7 7
Lanes:	2 0 0 0 2	0 0 0 0 0	0 0 2 0 0	0 0 2 0 0

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## Volume Module:

Base Vol:	331	0	226	0	0	0	0	1507	0	0	958	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	331	0	226	0	0	0	0	1507	0	0	958	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	348	0	238	0	0	0	0	1586	0	0	1008	0
Reduc Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	348	0	238	0	0	0	0	1586	0	0	1008	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	348	0	238	0	0	0	0	1586	0	0	1008	0

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## Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.88	1.00	0.71	1.00	1.00	1.00	1.00	0.90	1.00	1.00	0.90	1.00
Lanes:	2.00	0.00	2.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00
Final Sat.:	3334	0	2706	0	0	0	0	3437	0	0	3437	0

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## Capacity Analysis Module:

Vol/Sat:	0.10	0.00	0.09	0.00	0.00	0.00	0.46	0.00	0.00	0.29	0.00
Crit Moves:	****						****			****	
Green/Cycle:	0.17	0.00	0.17	0.00	0.00	0.00	0.74	0.00	0.00	0.74	0.00
Volume/Cap:	0.62	0.00	0.52	0.00	0.00	0.00	0.62	0.00	0.00	0.40	0.00
Delay/Veh:	40.8	0.0	39.1	0.0	0.0	0.0	6.7	0.0	0.0	4.8	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	40.8	0.0	39.1	0.0	0.0	0.0	6.7	0.0	0.0	4.8	0.0
HCM2kAvg:	6	0	4	0	0	0	12	0	0	6	0

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